# SUGGESTIONS FOR RENDERING MEDICO-MENTAL SCIENCE AVAILABLE TO THE BETTER ADMINISTRATION OF JUSTICE, AND THE MORE EFFECTUAL PREVENTION OF LUNACY, VICE, AND CRIME.*

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THAT medico-mental science is often at variance with the doctrines and decisions of the courts of law is a fact too well known and too generally admitted to need formal proof. It is almost as generally assumed that the consequent scandalous failures of justice, which too often occur, must be attributed to the defective education and knowledge of the profession. It is alleged that, as a body, we are for the most part ignorant and theoretical in matters relating to insanity; and if not ignorant, then presuming, and using the little knowledge we possess rather with the intent to rescue thieves and murderers from the legal consequences of their crimes than to help the doing of justice. It is certainly a fact, which many of us lament, that the corporate bodies of the profession generally, including the Medical Council, ignore medico-mental science as a distinct department of medical education; and consequently medical practitioners, not being duly trained, do sometimes appear to great disadvantage in courts of law.

Medical shortcomings are not, however, the subject of my paper, but certain fundamental defects in the principles and procedures of the law itself, which render medico-mental science sometimes even worse than useless, and always less useful to the commonweal than it might be, if rightly adapted to the needs of modern society. Nor would it be difficult to show that some of the crime and folly which occupy our courts and fill our reformatories, prisons, workhouses, and lunatic asylums, is capable of prevention by a well-devised use of medico-mental science. As these matters are wholly beyond the powers of the profession, I shall ask leave to move, at the close of the discussion, that a committee be appointed with powers to take such steps as may be thought necessary to secure a thorough inquiry by the Government into the relations of medical science to the administration of the law in regard to all persons alleged to be mentally disordered or defective, with a view to such improvements as may be practicable.

I do not presume to controvert the legal dictum that in this department, as in others, law in the abstract is the perfection of reason and common sense; but the contrary. The principle of the law is perfectly just and reasonable—namely, that both the legal responsibilities and the rights of an individual may be either restricted or wholly abolished, provided it be proved that he is mentally incapacitated for his duties or the use of his rights by either bodily disorder or defect. So that, in any trial which thus involves either the rights or the responsibilities of an individual, two distinct questions arise firstly, Is or was the individual mentally incapable? and, secondly, Is or was the incapacity due to bodily cause, and not to ignorance and vice? The first is plainly a question for a jury, to be determined by evidence of the conduct of the individual; the second, as plainly, can only be determined according to the rules of medical art, and by those versed in the kind of facts which constitute evidence of bodily disorder and defect. It is obviously in recognition of this principle that the opinions of medical practitioners are held to be necessary to the administration of the law in these cases. Existing defects are not therefore due to error in the fundamental principles of the law so much as to imperfect interpretations and applications of those principles. And I shall show that these are imperfect, partly because guided by obsolete medical doctrines, and partly because of defects in legal and medico-legal procedure. Some of these doctrines, indeed, so far from being in harmony with modern science, have really no ground in the common sense and experience of mankind. The legal responsibilities and rights of the young, termed infants in legal phrase, may serve as an illustration. The law in the abstract justly and rightly affirms that the young members of society are incapable and irresponsible in proportion to the incompleteness of their development, whether it be of body or of mind. Marriage is one of the first and most important of social duties, and the law therefore rightly undertakes to fix the age at which young persons are sufficiently developed to procreate and duly bring up children. This question, which is strictly within the domain of physiology and medical psychology, as well as common sense, is thus settled by the law as to females. In Ireland a woman cannot marry without consent until she is eighteen years old; in England she may marry at sixteen; but in Scotland a girl of twelve and a boy of fourteen can enter legally upon this duty. Now puberty, even in the south of Europe, is not attained so early, and still later in Scotland, so that such a law, if proposed now for the first time, would be at once repudiated, as only applicable to other races of men in other climes. If we inquire how this strange notion came to be part of the law of Scotland, we find it was transmitted from ancient Rome; further inquiry shows that Rome received the law from more ancient Greece, the great source of Latin literature and laws; and going still deeper into antiquity, it seems probable that Greece received it from more ancient Egypt, or else from the great and still more ancient Aryan source of Western language and customs.

The question of mental incapacity from disease or defect entered into and regulated all the proceedings as to person and property of the ancient Roman law. This principle has also been preserved to a great extent in Scotland as to property. But in England, while a person equally as in Scotland ceases to be a minor or an incapable at twenty-one, if he be at that age imbecile, foolishly prodigal (*prodigus*), facile in temper, and weak in judgment because undeveloped in brain and intellect,—in England the ancient common sense distinction between idiocy or defect and insanity or disease is not merely lost sight of, but repudiated. Lord Westbury said approvingly in the House of Lords, "originally there was a difference, but it has long since disappeared." And Lord Chelmsford said, on the same occasion (viz., the discussion of the Lunacy Regulation Bill, March 12th, 1862): "Under the existing law no person however extravagant, foolish, or prodigal, could be made the subject of a commission of lunacy unless his acts were such as to lead a jury to the conclusion that he was of unsound mind, and a verdict founded on imbecility or weakness of mind would be set aside as contrary to law." In short, the courts, abandoning the true principle of law, proceed to discuss the metaphysical questions of a man's sanity or insanity. Milton has represented the fallen angels as sitting apart in hell and discussing insoluble metaphysical questions like those raised in the courts, and a witty friend of mine affirms that the great poet did this to show that evil spirits were tormented, even in their recreations, by their bad proclivities, and that their appropriate punishment was to be "in wandering mazes lost." So, in truth, too often is the course of things in our courts when insanity is the question discussed.

Adults are subject to disorder and decline of the faculties, which place them in the same position in regard to property as infants and minors. Senile dementia—that "second childhood" which surely comes to every man and woman that lives long enough—may come on at an early age. In Scotland the same sound principles apply to these cases as to the others; but in England there must be the inquiry, not into incapacity, but into insanity. In Scotland the patient may secure protection privately, and avoid a jury-trial; in England his private affairs must be subjected, at great cost, to a commission sitting publicly, or to a jury.

The vice of irresistible drunkenness is an apt illustration of the transitional form of incapacity and irresponsibility in which physiological and pathological conditions combine. Nothing is more certain than the fact that a man having attained adult age, with all the responsibilities of a husband, father, and citizen, becomes an incorrigible drunkard, and quite incapable, from bodily causes, of performing his duties. He is too often a brutal ruffian, commonly a prodigal and a fool; yet the law of England does not provide for an inquiry into his capability of self-control, except in so far as to whether he be insane or not. Pending the solution of this insoluble question, he breeds drunkards to the third and fourth generation, ruins his family, and too often it is only bodily weakness, suicide, raving insanity, or an early death from disease, which saves him from the gallows. Surely common sense, Christian ethics, and medical science are agreed here, that it is a question of capability for the performance of duty with which society has to deal, and not a metaphysical question as to insanity. Pro-

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bably in practice such a method of dealing with these cases would prove the most efficient check on the vice itself.

That numerous vices and crimes originate in disordered brain-function is one of the principal discoveries of modern medicine; up to a late period the subjects of the disorder were classed with those who yielded to the temptations either of the world, or the flesh, or the devil; and even now those subtle morbid suggestions and impulses to do evil which are of the essence of the disorder are not unfrequently attributed, as formerly, from a very remote antiquity, to supernatural influences. A transitional kind, in which there are fixed ideas and delusions, yet a certain coherence of ideas, is termed partial insanity, monomania, and the like. To understand how the law deals with this class of cases it is necessary to examine its general principles. The Roman law treated raving maniacs, termed *furiosi*, as irresponsible agents; furiosity in Scotland is a term borrowed from Roman law, and means precisely what raving madness is in England. That persons who commit vice and crime in consequence of disease are to be excused from punishment is a natural principle of justice. And Lord Coke therefore truly says, that to execute an insane person is contrary to all law, and pregnant with the greatest danger. The Code Napoléon—the criminal code not less of ancient than of modern France—provides thus: "With respect to every crime and every kind of misdemeanour, no man can be made accountable who at the time he does the act is under aberration of mind." The French courts avail themselves of the knowledge of experts in determining the state of mind of alleged lunatics, but even with this help the French judges cannot understand the true nature of will-insanity. If it be alleged that a criminal has an irresistible impulse to commit crime, they epigrammatically say the law has equally an irresistible impulse to punish him. In England the old Roman notion of furiosity or raving madness is the measure of irresponsibility. If there be coherence of ideas with insanity of the will, the case is held to be only partial insanity or monomania. Chief Justice Hale, notorious for his superstitious persecution of decrepid old women, under the name of witches, is curiously, but significantly enough, a leading authority amongst modern judges, and was quoted as such in the House of Lords by two Lord Chancellors. It is needless to say that he disregards in his dicta alike the principles of pathology and common sense, and of ethics founded thereon. "Partial insanity," he says, "is no excuse; this is the condition of very many, especially melancholy persons, who, for the most part, discover their defect in excessive fears and griefs, and yet are not wholly destitute of reason; and this partial insanity seems not to excuse them in committing any offence, for it is matter capital. It is very difficult to determine the indivisible line that divides perfect and partial insanity, but it must rest upon circumstances to be duly weighed and considered both by judge and jury." What this judge meant by determining an indivisible line, and what the circumstances a jury has to weigh, have never been clearly explained, although the attempt has often been made. Hale's dictum has nevertheless become practically part of the law of the United Kingdom. If an insane man commit homicide in consequence of his insanity he is amenable, provided he be not wholly destitute of reason, and he is held to be not so destitute if at the time he committed the act he knew right from wrong. When public vengeance was balked by the acquittal of M'Naghten, who shot Mr. Drummond in mistake for Sir R. Peel, a discussion arose in the House of Lords, on March 13th, 1843, as to the law. The then Lord Chancellor, Lord Lyndhurst, declared that there was no doubt as to the law; that it is clear, distinct, and defined. In support of this opinion he quoted from the charges to juries in cases of alleged insanity made by very eminent judges, and he showed how all concurred in the legal principle, that a man is not to be held judicially insane when tried criminally if he knew right from wrong. Lord Brougham followed. It does not clearly appear (see Hansard, vol. lxvii. 3rd series, p. 727) what opinions he held. He certainly differed from Hale and the other judges when he said, "It is perfectly clear that what was called partial insanity and what was called, very incorrectly, monomania, if it existed at all times, made a person a lunatic;" apparently meaning thereby a lunatic in a legal sense—i. e., irresponsible. And although he seemed to agree with the current legal dicta in the main, he criticised the judicial explanations of it very severely. "What," he asks, "was the test as laid down by the learned judges? Here he might observe that he could have wished those learned persons had always used the same language, and that they had been pleased to substitute for certain vague indefinite expressions a more specific and precise phraseology. Their lordships had sometimes said that a man must be 'capable of knowing right from wrong.' That was the most common definition; but at other times they said he must be 'capable of distinguishing good from evil'—a totally different expression, more vague and lax.... A man might know right from wrong, and not know good from evil. Then there came in a third expression—'capable of knowing what was proper.' Another expression used was—'what was wicked.' So that there were four different tests in four different forms of expression: every one of them more vague, more uncertain, less easily acted on than the original one of right and wrong." With that politeness, however, which became the august body he addressed, Lord Brougham added that, although he was not sure that juries always knew "right and wrong" when thus vaguely charged from the bench, he knew, and their lordships knew, perfectly well what those learned judges meant by "right and wrong;" but he was not sure the public at large did. Again, Lord Campbell declared, in concurrence with Lord Brougham, that "he had looked into all the cases that had occurred since Arnold's case, and, looking to the directions of the judges in the cases of Arnold, of Lord Ferrers, of Bellingham, of Oxford, of Francis, and of M'Naghten, he must be allowed to say that there was a wide difference both in meaning and in words in their description of the law." The real cause of these acknowledged defects in the declaration of the law from the bench is in the utter obscurity and impracticability of the original dictum of Hale, upon which it is founded. There is, as the metaphysicians say, knowledge *in esse* and knowledge *in posse*—knowledge that is or can be remembered and applied, and knowledge that is not or cannot. When a cobbler working at his last tells me he was brought up to be a priest, and is in truth the Pope, it may be fairly inferred that, at the time he affirms the fact, his knowledge that he has been brought up and is a cobbler, is only *in esse*, and not *in posse*. So it is in dreaming, in many daily actions of life, and never more commonly from disease than in insanity. In short, in insanity, as in many other mental conditions, the conduct depends, not on what the man knows in the abstract, but on what he remembers at the moment: a state of mind to which no one—nay, not even the individual himself—can give evidence, except as to mere probabilities.

It is not surprising, then, that when a medical witness is asked to state his opinion, in accordance with the dictum, the results are so unsatisfactory. It cannot be otherwise in the nature of things; and it may be a subject for consideration whether the practitioner should not always decline to answer the questions so put to him, as being on a matter beyond his knowledge. I know of no parallel to the position of a medical witness, when asked whether the culprit at the bar knew right from wrong at the time he committed a certain act, than that of the prophet Daniel when he was called upon to act professionally by a historical melancholiac, the Great King Nebuchadnezzar. He has to divine both the legal dream and the interpretation thereof; and, of course, he fails.

Let us further inquire how other fundamental principles of law are applied to the procedure of the courts in cases of alleged lunacy. The law as to witchcraft held that a woman accused of it must be held to be guilty until it was proved she was innocent, and the result was that multitudes of innocent persons were found guilty in default of proof. In like manner the law holds that every man must be held to be of sound mind when he committed a certain act, and the like difficulty of proof gives the like results. If the act has been done by a raving maniac, that he was insane is plain to the dullest understanding; but if he be an ordinary lunatic, poverty-stricken, and perhaps imbecile, what chance has he of fulfilling the requirements of the law? Even if charitable persons were to undertake the costly duty of securing the requisite proofs (which is rarely done), it may be and often is impossible to satisfy the legal requirements. Thus a failure in evidence which would, and too often does, allow a ruffian to escape the punishment due to his crimes, because the law holds every man innocent until he is proved to be guilty, establishes the guilt of the insane criminal, who otherwise would be held to be innocent and an object of pity. I will quote a case in point, as related by Lord Lyndhurst in the House of Lords:—"A man was indicted [in a Scotch court] for the murder of another by shooting him whilst he was going across a moor. The defence set up was insanity. And the delusion the prisoner laboured under was this. He supposed the man whom he had shot to be an evil spirit, whom he was commanded by the Almighty to kill. No one doubted that if the facts necessary to support the defence had been made out to the satisfaction of the jury, the judge would have considered it a sufficient defence; but the facts were not made out, and the man

was found guilty." Lord Lyndhurst related the case simply in illustration, and not in disapproval, of the law. Indeed, it seems never to have occurred to the high legal authorities who discussed this question that in cases like this, and in all cases of delusions, the only direct evidence possible of the facts is the statement of the subject of them. All that medical science can do is to say whether such statement is probably a true statement or not; and as to this, the evidence upon which the medical practitioner forms his opinion must be not only necessarily circumstantial, but only valid even to that extent in proportion to his scientific and practical knowledge of insane delusions. This points to the need of experts to administer the law.

I might add much as to the influence of strong prejudices upon the courts to the disadvantage of medical witnesses, as well as of the insane criminal and his plea for mercy. These are so strong that even eminent men like the late Archbishop Whately have not hesitated to advocate the indiscriminate hanging of all who plead insanity in cases of homicide; yet if law in the abstract, which admits of extenuating circumstances, were duly applied, instead of a hard and fast line metaphysically invisible as well as "indivisible," there would be little difficulty. Just as in those cases in which insanity is not pleaded, but great and sudden provocation, or infirmity of health and temper and will, the law mercifully recognises the validity of the plea, so that murder becomes only manslaughter or culpable homicide, so it might be held when insanity is pleaded. While the culprit is declared guilty, an inquiry might be made as to how far there was in his state of health any extenuation of the crime, and what punishment, if any, be inflicted. I by no means overlook the fact that the treatment of the so-called partially insane in the courts has its origin in the deep-rooted conviction that they are capable of self-control, that they are therefore responsible agents, and that it is necessary to punish them criminally so as to afford a salutary example to others. I shall not enter upon so large a question, but would simply state here my mature conviction that a graduated scale of detention would act far more powerfully as a deterrent than the punishment of death, which latter, indeed, is not only insanely desired in some cases of lunacy, but rationally desirable in preference to life-long detention.

The safety of life and property must, however, always be the great end of all law and justice, and to this end medico-mental science is most available to the prevention of vice and crime, whether by lunatics or not. A certain number of individuals in the United Kingdom lose their self-control and commit suicide, to the extent of one in about every six hours. This is the result of causes, exciting and predisposing, of imperfect brain-nutrition, which to a considerable extent are preventable. So also with the majority of murders, which are committed in defiance of an ignominious death, as is proved by such phrases as "I'll do it if I swing for it," and the like. Further, there is a large number of criminals termed in France the "classes dangereuses," and, in English phrase, "known to the police;" and another still more numerous body, not exactly of this class, but incorrigible vagabonds, drunkards, mendicants. All these, numbering tens of thousands, are really so constituted corporeally that they possess no self-control beyond that of an ordinary brute animal—nay, less than a well-bred horse or dog. They are for the most part immoral imbeciles, so that however frequently they may have been subjected to prison discipline, the moment they are set free they resume their vicious and criminal course. Many of the imbeciles confined for life in asylums and workhouses only differ from these creatures in wanting the opportunity or the training for vicious courses. They are all the mere weeds of society; but the weeds multiply their kind, and thus continually keep up the breed. The law of hereditary transmission of mental and moral qualities, in these as in all other organisms, is inexorable. An army of police is required, in two divisions—one to watch and capture, and the other to restrain, these moral imbeciles; one division being in the field, the other in the garrisons—the borough and county prisons.

What would common sense indicate as the proper method of treating these cases? Surely as what they are—i. e., cases of incapacity; and would detain them under curators who would make them work. And as they are, for the most part, of the fertile age, and naturally propagate their kind, it would take care, at the same time, to prevent an increase of the breed. The law, however, allows them freedom to commit crimes, and add to the vicious population. The surgeon of a large prison in Yorkshire told me of one of these incorrigibles—a woman, whom he delivered of twins in the prison,—that the birth took place just nine months after a previous dismissal from prison—ripe, no doubt, for immediate conception.

An illustration of how the jail-bird began its career as a nestling I quote from a number of the *Pall Mall Gazette* for May last, in the form of a dialogue which is stated to have taken place between a visiting magistrate at one of the City jails and a juvenile offender serving out his three months:—"How old are you?" "Please, Sir, I'm thirteen." "How often have you been in jail?" "Please, Sir, eight times." "Have you ever been in Reading jail?" "Please, Sir, once." "Have you ever been in Westminster jail?" "Please, Sir, once." "How often have you been here?" "Please, Sir, six times." "Why do you come here so often?" "Please, Sir, becos at Westminster the turnkeys knocks yer about with their keys." "How do you contrive to get sent here?" "Please, Sir, I allus prigs in Holborn now." This poor jail-bird had even learnt politeness; yet he "allus prigs" when out of prison.

When a Bill providing that the sheriff might have power to send these habitual offenders to prison for a lengthened period was discussed lately in the convocation of the Royal Scottish Burghs, at Edinburgh, Lord Provost Chambers is reported to have said "he knew of a case in Edinburgh of a man seventy years of age who had spent forty years of his life in prison, a month at a time. He had been somewhere about 103 times in prison for small offences. If the Bill would cure such a state of things as that, it would receive his warmest commendation."

Nor is the prison management of these imbeciles satisfactory. They are sometimes treated as lunatics used to be treated. At an inquest held upon a prisoner who died insane in Millbank prison, the deputy governor testified that previously to his death the man was ordered to be placed in a penal service cell with matted walls for six months. And upon a late occasion at Millbank there were observed as many as a hundred imbecile and epileptic convicts confined in long galleries padded several feet high with thick matting to prevent the prisoners from injuring themselves against the walls.

It has been alleged that each of these incorrigible moral imbeciles costs the country, including the cost of depredations, an average of £300 annually. If treated exactly as what they are—namely, as hopelessly devoid of that moral sense and judgment which give the power of self-restraint, and in the spirit of Christian forbearance, kindness, and charity,—they would be prevented multiplying their kind, and made in a great degree self-supporting.

A too apt illustration of the evil results which follow upon this gross neglect of the simplest principles of medical psychology is shown by the condition of the children brought up in workhouses. They are described by Miss Hill ("Children of the State: the Training of Juvenile Paupers") as dull of apprehension, ill-tempered, indolent and listless, incapable, spiritless, and stupid to the last degree—in short, mere imbeciles. They indicate the traits of the rising generation of incorrigibles outside. Of the 300,000 educated in the workhouse, 80 per cent. are failures when sent into the world. A large proportion pursue evil courses, join the predatory classes, or fall stupidly into crime; or else they either return to the workhouse where they were reared, or become inmates of the county asylum. I might, if time allowed, point out how drunken vicious imbeciles, tainting their offspring to the third and fourth generation, serve to fill our asylums to overflowing; and that, unless means be taken to restrict their personal liberty during the fertile period of life, there must of necessity be a continual increase in the insane, imbecile, vicious, and degraded part of our population.

*Conclusions.*—If a Royal Commission were issued to inquire into these important matters, it would have abundant evidence brought before it to show—1. That the present state of our jurisprudence in regard to persons mentally incapable and irresponsible is in every way defective. 2. That the existing defects are not due so much to defects and errors in the fundamental principles either of law or of medicine, as to errors and defects in the interpretation and application of those principles; partly in consequence of their obsolete character, and partly because of corruptions of the law. 3. That the doctrines laid down in 1843 by the twelve English judges are of this obsolete character, and are therefore out of relation to the present state of medical science and experience. 4. That, although medico-mental science is still imperfect, it has advanced so rapidly concurrently with other sciences during the last half-century as to be largely available not only to the better administration of justice, but also to the prevention of lunacy and crime.

# OBSERVATIONS ON OPHTHALMIC SURGERY.

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## SYMPATHETIC OPHTHALMIA.

This is the diseased effect on the one eyeball, of a certain morbid condition which has previously existed in the other, in consequence, for the most part, of wounds that puncture or lacerate; but also from blows without any breach of surface; as well as any mechanical or chemical injury that induces disorganisation; from acute inflammation, ending in suppuration; from idiopathic inflammation of a destructive nature; from the intrusion of extraneous substances; from the development within the eye of deposits, cretaceous or bony; or from a tumour. Even surgical operations may produce it, of which the following examples are on record:—

The operation for the extraction of cataract was done on the left eye of a man between seventy and eighty years of age; the iris prolapsed, and chronic inflammation ensued. Three months later sympathetic inflammation caused rapid loss of sight of the right eye. A second case is that of a lady of delicate constitution, who had a full-formed cataract in one eye and an immature one in the other. The mature cataract was extracted; a small prolapse of the iris ensued; nitrate of silver was applied; severe pain and long-continued irritation followed. Three weeks later sympathetic ophthalmia attacked the other eye, and produced perfect blindness.

The application of a glass mask in the treatment of symblepharon, as recorded by Mr. Solomon (*Dublin Quarterly Journal* for 1863), acted as an excitant. The continued use of a worn-out and roughened artificial eye has been the origin of the evil. Iridectomy even is included in this catalogue.

It is a very dangerous malady, and the destructive effects are manifested by inflammatory changes of a low or subacute form, influenced perhaps by the low state of general health; for the inflammatory effusion is quickly organised. It may be termed the most destructive and dangerous inflammation to which the eye is subject; for if left to itself it invariably ends in blindness. It commences insidiously, and may spoil an eye, when occurring in children, almost before it is perceived.

Long ago it was publicly noticed by Himly, and Beer, and Mackenzie; by the last of whom it was named reflex ophthalmia. He used as a synonym, sympathetic.

The diagnosis of the sympathetic action can be made only by studying at the same time the cause as well as the effect; by examining together the two eyes; for its subjective and objective symptoms differ in no respect from those of some other maladies.

Care must be exercised not to pass the disease unrecognised, and not to mistake another affection for it, by supposing that the sympathetic influence prevails when there is nothing of the kind, but merely the same local manifestation of constitutional taint that exists in the other eye, and secondary only in the order of time. The traumatic cases are the most readily perceived. The exciting eye, that originally diseased, is always destroyed for visual purpose by structural disorganisation of some of its parts, separate and distinct from any physical incapacity, such as opacity of the cornea, or closure of the pupil, or cataract. It has been wounded perhaps severely, and the lens has escaped, or a portion of the vitreous humour; or perhaps the cornea only has been penetrated, or the iris or the lens penetrated; or it has been unmistakably damaged in another way, either within or without. Acute inflammation supervenes, and ultimately lapses into chronic. The time occupied by these stages of disease varies. The injury and its ravages may be confined to the anterior part of the eye, while vitreous humour and the posterior parts are intact, or disorganisation may reach all the internal tissues. These are important facts which have practical bearings.

The inflammatory action by which the exciting eye is first irritated, from any of the many causes that have been named, may seem to get well quickly, and the eye appear to recover from all vascular excitement. It is rare indeed for any sympathy to set in during this primary inflammation, if it may be so called. But there is a repetition of the inflammation without any apparent cause, or from the excitement of a blow or something else; and it now appears in a chronic form. This may remit and recur again and again.

It is nearly always during the chronic disease that the sympathy is induced; and although the symptoms of such disease may be slight—and it is more marked in some cases than in others,—it is always capable of detection. There is a definite kind of action that can be recognised at a particular time and in a particular tissue as the origin or starting of the bad influence; but enough can be detected sufficiently early to enable that to be done which is right, and this should suffice for the practical student. Hair-splitting must be left to the theorist. There is invariably soreness of the eyeball when it is touched. This is never absent; it may be the only symptom, and should always be sought for. A sense of general discomfort is next commonly present, with paroxysms of pain. If there be generally any surface redness, it is more marked at this time.

The sympathising eye has its symptoms well marked, although the nature of the danger is not known—still less any warnings understood. They are definite and easy of recognition.

A certain condition is often met with in an eye just after its fellow has been wounded and sight destroyed; and the same may be seen after unsuccessful operations on the eyeball. There is fatigue from reading, a sense of weakness, and even intolerance of light. This is not the morbid sympathy which is being treated of; for it soon passes away, after getting better day by day.

Intolerance of light, for the most part associated with slight lachrymation, is the first common result. Some form of impaired sight is the next bad omen; and this is shown in defective accommodation, such as incapability of sustaining vision on minute objects, and loss of definition,—hence the feeling of discomfort or distress which ensues when the eye is used. This simulates asthenopia. Muscæ, spectra, flashes, stars, and coruscations follow. Redness of the eyeball is now apparent; and it is at first that kind of vascularity about the ciliary region, from the greater development of veins, which is the consequence of increased vascularity within the eye. If pain has not set in, it will appear now. It may be slight or severe. It may be of neuralgic character, and the supra-orbital nerve may be implicated. The eyeball is intolerant of touch from the pain that any pressure occasions, especially over the ciliary region. There are now apparent appreciable structural changes, and the outer parts of the eye undergo those morbid alterations which are so familiar in an eye that is damaged by slow inflammation, especially of a rheumatic or of a gouty origin. The pupil contracts adhesions, and is no longer free. The iris seems discoloured,—probably from the aqueous humour becoming serous. It then loses the markings of its fibres, being infiltrated with fibrin, and unites itself with the capsule of the lens. The pupil area is closed with lymph. The cornea is often hazy from nebulous deposits, in the form of minute dots in its posterior elastic membrane. Softening of the eyeball, with shrinking, are the later manifestations.

It is not worth while stopping to discuss the texture that is first involved: whether the morbid action begins in the retina and travels forward, or in the front of the eye and proceeds backwards; whether the eye is threatened with retinitis, or iritis, or iridocyclitis, &c.

Such is the group of symptoms as they generally appear; but variation is met with. In one case the pain will be the leading feature; in another it may not exist. In some, the inflammatory changes in the iris and about the ciliary region most attract attention. Then the failing vision may alone, for a long time, point to the existence of the disease. It may therefore seem from a superficial observation, that there are different kinds of sympathetic injury. But there are not. It would be as incorrect to suppose that different kinds of syphilitic virus affect the eye, because in the one instance the retina alone is attacked, in another the iris shows the greatest change, and in a third the entire eyeball is diseased. A general and comprehensive view must be taken, the one origin alone of the evil received, and the several symptoms regarded as the many features of the same disease. In former years I thought such plurality probable; for it seemed to me that there was sympathetic irritation that could be readily stopped, distinct and apart from the graver and more advanced disease, which is characterised by fibrinous infiltration into all the internal tissues except the lens, and produces those changes which end in atrophy. Being aware, now, that any early symptoms, or anything which may be called irritation, inasmuch as there yet lacks inflammation, does in the end, if left alone, pass into destructive changes, and that the same consummation follows

any variation in the order of the symptoms, in their duration, or in their intensity, I cannot resist my present conviction. But really the question of classification is immaterial, as there is only one remedy.

The sympathetic effect may appear at any time. It may ensue in a few weeks or months, or not for years. The latter condition is the more often seen where there is an extraneous body in the eye.

In young persons and in children the affection is more acute and rapid than in adults.

The sympathy is always imminent where an eye has been blinded by an accident, or disease originating within itself; for such are mostly disorganised eyes, and may at any time pass into that condition of chronic inflammation which will kindle the sympathy. It matters not how long a time may have passed since sight was lost, whether one year or twenty, or fifty or more. It is that such eyes have a tendency to degenerate, and to form new products; and calcareous deposits and caseous are common. These are apt to induce a disturbance, which is transmitted. Cretaceous degeneration of the crystalline lens and of its capsule is no uncommon source of the sympathy. Osseous degeneration of these parts may produce the same effects. The altered lens, including its capsule, is generally adherent to the iris. I have traced irritation to have commenced from its becoming loose. The earthy degeneration may be simultaneously formed in several portions of the eye, between the retina and the choroid, in the lens, and in a corneal cicatrix. Osseous degeneration of any of these parts or osseous deposits may produce similar irritation.

Sympathetic ophthalmia does not always proceed in any regular ratio, and the determination seems to depend on the intensity and on the rate of progress of the exciting action, whether quick and severe, or slight and slow. This will explain its remission and recurrence. The irregularity might tend to cause an error in the diagnosis, and should be taken into account. To guard against mistake, it is necessary only to ascertain if there be simultaneous disease in the two eyes, the presence of which is confirmatory of the implication. If, then, a patient who had lost an eye from accident or disease were to apply to me on account of the eye heretofore well, but now attacked with symptoms that I have pointed out of sympathetic derangement, and palpably paroxysmal, I should examine the eye primarily injured, or whatever remained of it, and if I discovered any morbid action of the nature described, I should say that I had before me a case of sympathetic ophthalmia.

Fortunately the disease is not common. It is rare. With all my opportunities for observation, I meet with few examples. A year may pass, or even a longer time, without my seeing an example. It is difficult to understand how some men abroad meet with them in such large numbers.

*Ophthalmoscopic symptoms.*—The internal examination of the eyes gives no assistance in diagnosis, because organic changes are not visible till late in the disease. In many of the cases examined by me at the commencement I have detected nothing. Even after there has been much intolerance of light, muscæ, spectra, and flashes, no change was perceptible. Later in the disease the choroid and the retina are congested, or there is haziness of the vitreous humour, by which the fundus is obscured. It has been said that excavation of the optic disc is a characteristic mark.

Is there any general means of preventing sympathetic inflammation? is a question that has often occurred to me. I believe that much may be done to hinder it, as it often comes on in consequence of neglected disease. Is there anything which predisposes the second eye to the sympathy? I think that the answer must be, there is not. It creeps on without imprudence or any external influence that would be injurious under ordinary circumstances. In two recorded cases it was supposed that excessive reading had developed it; but the accuracy of this is questionable.

The treatment will be given in the next communication.

Brook street, September, 1868.

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THE name of "Faraday" has just been given to one of the streets of Paris. This tribute paid to the memory of our great chemist by a foreign Government cannot but be gratifying to the English mind.

The little town of Kilsyth (Stirlingshire) has set a worthy example to places of far greater importance; the authorities have commenced operations for supplying to the inhabitants thirty gallons per head daily of pure water brought from springs of traditional celebrity in the hills adjacent.

# ON THE SOUNDS OF THE HEART IN THEIR RELATION TO PATHOLOGY.

BY ARTHUR LEARED, M.D., M.R.I.A.,

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IT is now a long time since I first brought forward an entirely new explanation of the sounds of the heart, founded upon carefully made experiments. Coming as a disturbing influence after the question appeared to have been authoritatively settled, one could hardly wonder if its recognition has been tardy. Nevertheless many have fully accepted my views.

No subject in physiology has engrossed more time to so little purpose. "So many works," say Rayer and Barth in their essay on Auscultation, "have been published on this subject that science is really encumbered by them, and through the mist of opposite theories and contradictory facts the observer is scarcely regaled by a single beam of truth." Yet, barren as the results have proved, this is strong testimony to the interest as well as to the importance of the investigation.

As for my own explanation, experience and an extended observation of its relation to pathology have only strengthened first convictions. It is chiefly this relation, and evidence founded on certain clinical facts, that I now propose to lay before the profession.

Both the normal and the abnormal sounds formed by the circulation of the blood, complicated as they are apparently, have causes more simple and more closely allied than is generally supposed. Now, it will be at least granted that whatever explanation of the normal sounds fits into and accords most clearly, and in the larger number of instances, with the explanation of their abnormal changes, is most worthy of acceptance; and, conversely, it will be conceded that any theory which is incapable of adaptation in a salient and important respect should be rejected.

The morbid auscultatory phenomena of the heart, considered in their various relations to time, rhythm, position, &c., are very numerous; but it is remarkable how little the connexion between these sounds and the natural sounds of the heart has been taken into consideration by authors. From causes which will afterwards appear, most theorists have, indeed, been obliged to ignore any connexion between the two classes of sounds. Yet there are certain broad facts in which, if physiology and pathology do not agree, there must be a complete absence of truth on one side or on the other. *De minimis lex non curat;* in like manner I propose, as sufficient for my present purpose, to deal with the more important points of cardiac diagnosis, and to test the truth of the prevailing theories of the sounds of the heart by investigating the connexion which exists between the sounds issuing from the organ in a state of health and in disease. I must refer to what I have published on the subject for the facts and arguments upon which the present views are mainly founded.* It will, however, be necessary to state briefly the views themselves, and to point out how they differ from those which have enjoyed the longest and most general acceptance.

In common with every other sound formed by the circulation, the sounds of the heart mainly emanate from the blood itself. They are not *essentially* due to the vibration of valves or to the tension of muscle; and if these causes do contribute in a minor degree to form the sounds, either exceptionally or constantly, my argument is not affected thereby.

If the blood of natural consistency circulated in its vessels under the natural pressure and without any rhythmic motion, no sound whatever would be caused. But since it is thrown into broken and impetuous currents by the action of a powerful forcing pump—for such the heart is,—sounds are necessarily produced. These sounds are formed on the same principle as those which occur from the action of water in certain hydraulic apparatus.

But besides rhythmic motions, certain conditions must be present to produce the particular sounds in the heart which we associate with health. If one or more of these conditions be wanting, it either happens that the sounds formed are nearly inaudible, as in case of extreme debility of the heart, or else new sounds are developed, which indicate particular forms of disease.

Both the first and the second sound of the heart are formed by the blood in the commencement of the aorta and pulmonary

* On the Sounds caused by the Circulation of the Blood. 1861.

artery, and the mechanism of both are closely allied.* It will best serve my purpose to quote here in part what I have already published on this subject.

"The *first sound* coincides with the ventricular systole, and is caused as follows:—Blood, having been driven from the ventricles into the aorta and pulmonary artery, comes into forcible contact with blood in these vessels, which, supported by their semilunar valves, had attained a state of momentary repose. The impact between the fluid in motion and that in a state of rest gives rise to the sound. The well-known *thud* heard during the action of the common forcing-pump is chiefly due to an analogous cause; that is, to the impact between water thrown into violent motion and stationary water in the discharge-pipe. .....

"Four conditions are necessary for the production of the perfect first sound:—1. Sufficient viscidity of the blood. 2. Sufficient pressure upon the blood. 3. Sufficient force in the circulation. 4. The absence of obstruction at the outlet of the heart. When all these conditions are fulfilled, the result is a perfect shock sound. If, however, the first condition (viscidity) be wanting, we find in place of it the blowing sound of anæmia. Pressure on the blood prevents murmur by preventing friction. When the pressure is much diminished by hæmorrhage, the first sound in this case also changes to a murmur. The force of the adult left ventricle has been variously stated; but the estimate of Valentin, that it is sufficient to overcome a resistance of four pounds, seems probable. It is at all events certain that when the force of the heart is much diminished, as occurs in certain fevers and in syncope, the first sound becomes impaired, or is altogether lost. The fourth condition —absence of abrupt interference with the current—is resolvable into the second. For any obstruction at the mouth of the aorta or pulmonary artery, whether it be obstruction of its calibre or the projection of an atheromatous deposit, must cause diminished pressure in the vessel beyond the obstruction." The principles upon which a murmur is then formed will be hereafter explained.

"The *second sound*† occurs during diastole, and in its mechanism closely resembles the first. The blood having been driven with much force into the aorta and pulmonary artery, a portion of it recoils, but is checked in its rapid descent towards the heart by the semilunar valves. The sound is caused by the concussion thus induced, the force of which is, however, by no means sustained by the valves alone, for they are thoroughly supported by the ventricles and their contents. This is obvious since there can be no approach to a vacuum in the heart. The valves are to be regarded as separating media which do not themselves sustain the force of the descending blood. A valve thus supported is known in the arts as an equilibrium valve. An experiment at hand in most houses demonstrates the principle on which the second sound is formed. When a cock, attached to the lower end of a perpendicular pipe of some length, through which water is flowing from a cistern, is suddenly turned, a loud jarring sound is heard.‡ It is caused by a concussion in the water from the sudden arrest of its onward flow. The semilunar valves are here represented by the plug of the cock, and, allowing for the difference between rigid and flexible materials, the conditions are very similar, since the elastic reaction of the vessels effects a pressure on the blood which is effected in case of the water by length of the pipe. If, then, the pipe and cistern are capable of yielding a sound which may be heard at a considerable distance, it cannot be wondered at if the heart and its vessels, on the same principle, give rise to sounds audible through a stethoscope or by direct contact with the body. If the cock is only turned so as to allow even a small portion of water to pass through, a rushing sound (in this case continuous) results. The change of the normal second sound into a murmur from incompetency of the valves is thus demonstrated. The second is a sharper and shorter sound than the first, because the separation between the opposing blood is definite and complete. We have seen that in case of the first sound several conditions are necessary to ensure sufficient molecular cohesion in the separate bodies of blood at the moment of contact, which must also be accompanied by considerable force. But the intervention of valves in the present case causes the conditions to undergo considerable modifications. Less force is requisite. It is for this reason that loss of power in the heart affects the first sound so much sooner than the second. Viscidity of the blood is not a necessary condition; hence in anæmia the second sound never degenerates, like the first, into a murmur. On the other hand, a condition peculiar to the second sound is, that the valves shall be competent. If the closure of the aortic valves is imperfectly performed, the well-known bruit from aortic regurgitation occurs, and this may completely supplant the normal second sound."

The fact that the second sound is often replaced by a murmur of moderate loudness, so that any other sound would not be drowned by it, affords a strong proof that the normal sound is formed by concussion of blood, as already described; for if it were caused by vibration of the aortic valve, the closure of even one segment of it, supposing, as is often the case, this to remain healthy, would *pro tanto* be sufficient to produce a normal sound that would always be heard coincidently with the abnormal sound.

An objection has been raised against the present explanation of the first sound which cannot be passed over here. It has been alleged that there can be neither stroke nor concussion formed between blood issuing from the ventricles and the passive blood in the great vessels. Dr. Billing, in particular, says: "He [Dr. Leared] does not seem to recollect that (unlike the stiff valves in his experiment) the sigmoid valves float as flaccid and passive in the outflowing stream of blood as the long leaves of a water-plant waving in a running stream. And, moreover, there is no *concussion* when the blood from the ventricle *pushes* forward the blood in the artery."*

Now if the analogy derived from the force-pump is insufficient, let me once more refer to the noise which occurs when the flow of water from a pipe is suddenly arrested by turning a cock. For the formation of this sound a small amount of pressure on the moving water is sufficient. But let me ask whether the ejection of its contents with a force equal to four pounds against stationary blood in the aorta is not also likely to cause sound? A concussion occurs between the opposing bodies of blood just as when the flow of blood or water through a tube is instantaneously stopped. Water is very incompressible, and in this respect a column of the fluid, although moving rapidly in a tube, may be almost regarded as a solid bar, like so much iron. We nevertheless observe that the commotion caused in its particles by turning the cock produces a loud noise. Hence it is certain that in case of blood moving impetuously, whether out of or towards the ventricle, sound must be caused. There is, indeed, a difference not only in the direction but in the degree of force. The descending blood is sonorous because it is suddenly arrested; and the ascending blood is also sonorous, because checked, although less completely, by the obstruction it meets from the contents of the aorta. And it is because of this incompleteness that much greater force is requisite for the formation of the first sound than of the second, which coincides with what has been previously stated. Moreover, the duller and more prolonged first sound proclaims its origin in a less perfect concussion, although induced by a much greater force of propulsion.

In short, there is no escape from the conclusion that, since sounds are formed by water in the manner described, they must, under the same conditions, be also caused in blood within the living body. There is, of course, an enormous difference between the conduction of sound by soft and by hard substances. If the heart and its vessels were made of some sonorous metal its sounds would be a nuisance to ourselves and to all about us. In the silence of night we are occasionally troubled by the low but still self-audible sounds formed within us. It is at least satisfactory to know that they are formed in the blood itself, and not, as some believe, by the rude tension of, and great pressure upon, valves not thicker than ordinary writing paper. In the case above supposed, repose would be impossible, and life itself unbearable.

An aortic murmur, then, is nothing more than the modified shock or normal sound; and all the sounds formed by the

* On this point, the assertion of so competent an authority as C uveilhier is worth quoting. In his examination of an infant born with the heart exposed, he found that the maximum intensity of both sounds was at the same place—the base; and he observes: "Hence it is at the base of the organ we are to look for the cause of these sounds." (Cruveilhier, *Gaz. Médicale de Paris*, 1841.)

† The cause of the second sound is that about which opinions are at present most agreed. It is assigned to vibration of the sigmoid valves by those who differ widely in respect to the first sound. As might be expected, therefore, my explanation of the formation of the second sound has been less generally regarded favourably than has that which I have given of the first sound. But in the *British Medical Journal*, May 12th, 1866, Dr Shapter put forward the same views about the second sound. On the publication of my statement that he had been anticipated (Ibid., Aug. 4th, 1866), my priority in the matter was acknowledged by Dr. Shapter in courteous terms (Ibid., Sept. 1st, 1866).

‡ An effectual method of preventing this noise is sometimes adopted. It consists in connecting the part of the pipe above, but close to the cock, by means of a small tube with a chamber containing air, by whose elasticity all concussion is done away with. I am curious to know whether the sounds of the heart have ever been observed to have been wanting in cases of admission of air into the bloodvessels; for if the air had reached the aorta, I would expect the second sound at least to be annulled.

* On the Lungs and Heart, p. 24.

circulation of the blood are closely correlated in their causes. Now since certain conditions are requisite for the formation of the normal or perfect sound, I shall henceforth use the term "degeneration" to express any imperfection that depends upon the absence of one or more of these conditions.

I must here call attention to a very inaccurate expression commonly used by medical authors. Speaking of murmurs in the heart, they say "there was a *bruit de soufflet with* the first sound," or "*with* the second sound," as the case may be. Obviously this arises out of the false conclusion that the normal sounds have their origin in something different from that which produces murmurs. But, if that be the case, a sound emanating from anything but the blood itself, be it muscle or valve, would invariably be heard coincidently with a murmur, which is an admitted blood-sound, except when the murmur is loud enough to drown the normal sound—a rare occurrence. When the subject is thus approached, an incongruity is perceived, and, to elude this, a phrase, not based on the candour which science demands, is employed; for the normal sounds are not generally accompanied by, but substituted by, murmurs.

From the rarity of disease at the right side of the heart, practically, the pathology of its left side alone concerns us. But if, while we listen to an uncomplicated murmur either at base or apex at this side, the stethoscope be slightly shifted to the right, the faint normal sound of the right heart may be generally heard coincidently with the murmur from the left. In fairly considering this subject, therefore, the duplicate origin of the sounds must be kept in view; nor, indeed, is the possibility of the formation of an imperfect normal sound synchronously with a murmur, and both at the left side, denied. What is objected to is, the general instead of the exceptional employment of a mode of expression by which erroneous theories are sought to be propped.

But besides degeneration into murmur, the first sound is especially liable to alterations in intensity, duration, and pitch. These changes cannot be so well accounted for by any explanation of its cause as by the present. They are due to variations in the force with which the blood is impelled, or else in its pressure or viscidity, according to which the production of murmur is approached or receded from. By no other means can the complete degeneration of the sound into a murmur of *moderate loudness* be satisfactorily explained. Nor do the exceptional cases mentioned affect the statement at first made, that it is no less wrongly than constantly said, "there was a murmur *with*," when it ought to be *instead* of, the first sound.

*(To be concluded.)*

## ON DIAGNOSIS, IN THE FEMALE, BY THE HAND INTRODUCED INTO THE RECTUM.

BY C. F. MAUNDER,
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IN a recent number of THE LANCET I suggested, as a means of determining the precise seat and nature of obstruction high up in the rectum, the introduction of the hand, obstetric fashion, into that viscus; and related a case in which the examination so conducted in a female nearly seventy years of age led to an accurate diagnosis, and was immediately followed by colotomy, performed to relieve complete intestinal obstruction. That patient now, six months from the date of operation, is in fair health.

A few days since my colleague, Dr. Head, requested my opinion in the case of a young woman with atresia vaginæ. With this exception the external signs of her sex were sufficiently developed. We were anxious to determine the presence or absence of a uterus, as well as the possibility of reaching that organ by means of an artificial vagina. The finger in the rectum enabled us to detect the left ovary lying low down in the pelvis, and on a higher level than this the digit just reached a firm body to the right of the mesian line, which might possibly be the cervix uteri. It was determined to cut for this in the natural site of the vagina. Having made an incision in the mesian line between the fourchette and the meatus urinarius (where was a depression), I tunneled my way with my forefingers upwards in the direction of the supposed os uteri. A passage thus made, the length of my finger allowed me to feel something, but still at a distance from the point of the finger, and not in the mesian line. I was unwilling to cut further. At this stage Dr. Head suggested that I should resort to the mode of examination which he had heard I had adopted, and as is above mentioned. I accordingly (the back of the fingers and hand being well oiled) introduced the hand into the rectum, and was enabled to determine the absence of the uterus, but the presence of the right ovary, and it was this organ which we had suspected might possibly have been the cervix uteri. With the left hand in the rectum, and the right upon the anterior abdominal wall, I was enabled to explore the pelvis with facility.

In cases in which it is of vast importance to determine with accuracy, as it certainly was here (question of marriageability), the state of the pelvic organs, whether in reference to congenital malformation or to morbid growths (tumours &c.), the hand introduced will avail much.

Should the sphincter be ruptured, as it was slightly in the above case, incontinence of fæces for a short time is a matter of little moment when compared with the great importance, in certain instances, of arriving at a positive diagnosis.

*Note.*—The patient being thoroughly under the influence of chloroform, the hand should be introduced with the backs of the fingers and the knuckles towards the hollow of the sacrum, up which it will glide as soon as the knuckles have passed the sphincter, either by dilating or rupturing it.

ON THE

## FUNCTION OF THE GANGLIONIC SYSTEM IN RELATION TO THE OPERATIONS OF MIND.

BY METCALFE JOHNSON, ESQ., M.R.C.S.E.

OBSERVATION of the effects of organs, such as the liver, uterus, &c. (under the influence of the ganglionic nerves), in conditions of disease, upon the mental operations, shows us that mind is not solely the result of the cerebro-spinal system in the performance of its duties, but the consequence of the combined efforts of both systems.

The frequent insanity of persons of depraved habits of the sexual organs, the depressed spirits or hypochondriasis of hepatic disorders, the vomiting of cerebral disease, the diuresis of mental excitement, the diaphoresis of fear, as well as the lachrymosis of grief, point to the conclusion that the ganglionic and cerebro-spinal functions are so inseparably connected that we may safely infer that mental operations result from the combined efforts of the whole nervous system, ganglionic a well as cerebral—in fact, that *corpus sanum* is the *propter hoc* of *mens sana*.

The enantia (ἐναντίον) of mind are instinct and experience, or sense, just as ozone and antozone are the enantia composing oxygen. It may be said that instinct is common to the whole animal kingdom, while sense is proper to the vertebrata. True, attempts have been made to show a cerebrum in some of the invertebrate animals; but if we allow the performances of the insect world to result from experience, we shall conclude, after the experiments of Maraldi and Kœnig, that the bee is possessed of the highest mental organism of all created nature; for where is there in the most civilised states one which evinces such perfection of social, sanatory, and constructive laws?

The instincts proper to the whole animal kingdom are two, gastric and genital; the former to serve for the maintenance of the animal; the latter for its perpetuation. The senses, commonly called five, are in reality but modifications of the one function of sensation. That the instincts are the *propter hoc* of ganglionic, and sense of cerebro-spinal systems will be seen in the sequel. The coincidence of instinct and sense, invertebrate and vertebrate, is, at least, remarkable.

From the tree to man we find a gradual transition of nervous function, only remarking the hiatus between Mollusca and Pisces, which has as yet never been spanned. The tree is insensible to external touch. The sensitive plant (first homologue of sensation) presents a remarkable peculiarity. Chara, Diatoms, Paramæcium, Volvox, and Vorticella (first homologue of reflex motion) show progressive stages of the function. Beroë pileus (first distinct ganglia) and the diploneurose system in

Articulata are steps in advance. But in Ascaris we observe the first evidence of the binary form of instinct anatomically developed in the two ganglionic rings around the mouth and female vulva—an evidence of the gastric and genital instincts. The nervous ring around the œsophagus in Rotifera (first supra-œsophageal ganglion) and prolongation to a cord (first homologue of spinal column) in Hydatina. Chains of symmetrical ganglia, with enlarged supra- and sub-œsophageal ganglia, in Papilio brassicæ and the concentrated ganglia of the imago of Melolontha vulgaris. These evince successive developments of ganglia till we arrive at the higher forms of Mollusca, and thus at an end of the invertebrate system. In this class of creatures we observe the reign of ganglia, and evidence only of instinct.

Passing now to fishes, we find a new neural element, Prosencephalon of Owen, who says:—"The anatomical condition of the prosencephalon (of fishes), and its homology with the hemispheres of the bird's brain experimented on by Flourens, would lead to the belief that it was in this division of the fish's brain that impressions became sensations, and that here was the seat of tenable ideas." From the smooth brain of fish to the convoluted brain of man is but one gradual progression of successive forms of perfection. And with this increase of convolution is evidence of increased perception, of sence, and of reasoning power.

Taking man, then, as the subject of our investigation, we will inquire, What are the functions performed by the various component parts which go to make up the one whole Mind? And these parts are, (1) the cerebro-spinal nerves, terminating in corpus striatum and thalamus opticus; (2) cortical structure, or grey matter, of cerebrum; and (3) the ganglionic system of nerves.

First of Nerves. Kirkes (in his Handbook of Physiology) says: "Nerve-fibres appear to possess no power of generating force in themselves" (p. 390). "All nerve-fibres are mere conductors of impressions" (p. 392). "No nerve-fibre can convey more than one kind of impression" (p. 394). They consist of two sets of fibres, afferent and efferent.

Now of Thalamus and Corpus Striatum—homologues of supra- and sub-œsophageal ganglia, "most assuredly to be regarded as ganglionic centres" (Carpenter, p. 677). They are not the ultimate links in the chain in the manifestation of psychological phenomena; as they may be injured, and yet mind remain. (See Wilks, Guy's Hosp. Rep. 1866.) They seem capable of receiving stimuli from afferent and conveying them to efferent nerves. (See Carpenter's Comp. Physiol.: on the automatic motions of pigeons after removal of cerebrum in slices.)

Now, as regards Grey Matter of Convolutions, Sir C. Bell says: "I have never seen disease general on the surface of the hemispheres without derangement of the mind."

In general paralysis, whose earliest symptom is some eccentricity or other mental aberration, Wilks recognises "chronic change in the brain, especially the grey substance. .....The wasted brain (convolutions) in delirium tremens denotes a failure of mental power.....There can be no doubt that this portion of the brain (cineritious substance) is intimately connected with the intellectual operations."—(Wilks, Guy's Hospital Reports, 1866.)

"There seems a strong probability that there is not a direct continuity between any of the nerve-fibres distributed to the body and the medullary substance of the cerebrum. Although it was long held as a physiological truth that the principal part of the sensory fibres passes up to the grey matter which forms the surface of the cerebral hemispheres, and that the fibres which are subservient to voluntary motion originate in the same situation, and pass downwards through the spinal cord and nerve-trunks to the muscles; yet anatomical inquiry fails to sanction such a doctrine, and tends, concurrently with the results of physiological investigation, to the conclusion that no sensory fibres pass upwards beyond the chain of sensory ganglia (including the thalami optici), and that no motor fibres really originate from any higher point than the corpora striata."—(Carpenter, Compar. Physiol.)

Dr. Wilks mentions a preparation in Guy's Museum (1564[75]) of a slice of brain, showing the separation of the external layer of the cineritious substance.

"The observations of Prof. Wagner, who enjoyed several opportunities of examining the brains of men endowed with great power of intellect, seem to point to the conclusion that the more richly convoluted brains coexist with great intelligence."—(See Turner on Convolutions of Cerebrum.)

"Now if it be true that the superficial grey matter is intimately connected with mental activity, then it follows that the multiplicity of the convolutions is connected with the development and increase of intellectual capacity, the substratum of which is the increased quantity of grey matter."—(See Carl Vogt, Lectures on Man.)

Finally, with respect to the Sympathetic system: "The sympathetic nerve when excited produces contraction in the arteries. If you divide on one side the branches which supply the globe of the eye, you will very soon remark a notable hyperæsthesia of the conjunctiva follow on the operation. If we divide the sympathetic nerve, the vessels are then dilated, and the blood passes from the arteries into the veins without undergoing any material change; and when drawn from the jugular it is almost as ruddy as that which escapes from a wound inflicted on the carotid. It was formerly believed that the oxygen introduced into the lungs was then and there combined with the elements of the blood. We are now aware that the combination of oxygen with the cast-off materials of the economy takes place, not within the lungs, but in the very depths of the tissues themselves. If it is intended to propel the blood from the arterial into the venous system without altering its properties, to accelerate its passage is the safest method of obtaining this result. If, on the contrary, it is desired to create in this respect as wide a difference as possible, these opposite effects are produced by galvanising or dividing the sympathetic nerve. The numerous vessels which ramify in the brain and spinal cord being placed under the control of the ganglionic system, the influence of the sympathetic nerves extends to the very centre of the nervous system. In the experiments of Donders (the introduction of a thermometer into the skull after the division of all the branches of the upper cervical ganglion) the cerebral substance itself participates in the effects of this operation, its temperature rises, its vascularity increases. When the ramifications of the system (sympathetic), which spread to the outer ear in rabbits, are separated from the centre of nervous action, the vessels are dilated, the blood flows in an arterial state to the veins, and the ultimate result is an augmentation of temperature in the affected region."—(Claude Bernard on the Spinal Cord.)

Passing, then, in review the opinions of these various authors, and considering the facts which they bring forward, a theory of mentation may be deduced as follows:—The afferent nerve conveys the impression produced by an external stimulus (say the prick of a pin) to the sentient nerve of the skin; a sound or combination of waves of sounds to the tympanic nerve; a smell, composed of odoriferous particles, to the olfactory; or a taste to the gustatory. This impression passes through the nerve-fibre to the ganglionic centres, corpus striatum, and thalamus opticus. From thence the efferent nerve conveys the impression to the cervical or other ganglia; the ganglion to the carotid ganglion; and this produces its effect upon the internal carotid artery, which, by its capillary ramifications over the grey matter of the convolutions, produces sensation, modified by the nature of the primary stimulus and its conveying medium. The result of this stimulus to the capillaries is the secretion of brain of such a kind as to produce a more or less permanent effect, according to the formation and arrangement of grey substance. In case action is to be the result of sensation, the stimulus may be conveyed from the grey matter of convolutions to the grey matter of spinal cord, which may at once send out its telegraphic message to the muscle by means of the efferent nerve of the anterior root or column.

In further elucidation of this suggestion, let us suppose a stimulus—say the odour of a rose—to be conveyed by the olfactory nerve, through thalamus and corpus to the ganglia. This stimulus causes the distension and contraction of certain capillaries with blood; and the histological change to take place in these capillaries to be called 1, 2, 3, 4. Again, the form and colour of the rose, through the optic nerve, to distend certain other capillaries, to be called 5, 6, 7, 8. Again, the undulations of sound produced by the word "rose" to excite the auditory nerve, so as to promote the distension of capillaries 9, 10, 11, 12; and so on through the senses of feeling and tasting. The resultant of all these vascular distensions will be a more or less perfect image of a rose, which will be more or less perfectly reproduced whenever any one or more of the senses is brought under the impression of the rose. Now, let us imagine the olfactory and optic nerves to be stimulated by a rose at the same time that the senses are being excited by the associations of some other object—say "The Old House at Home,"—we know by experience how often a sense under the stimulus of the one idea will reproduce the other. The combinations of this form of mentation may be varied and modified to an unlimited extent.

In explanation of the particular state of the capillaries under

the stimulus of ganglionic nerves, we find, by the experiments of Claude Bernard, that when the ganglionic stimulus is applied to the vessels the conversion of arterial to venous blood takes place, and that, as a result, cellular changes of formation and decomposition of effete cells ensue; while in the absence of ganglionic influence the blood passes through the capillaries to the veins in the arterial condition. From the experiments of Donders, this would appear to be the case in brain as well as other tissues of the body.

Of the formation of images or ideas called thought, it must be remembered that we cannot think without words, or at any rate without the reproduction in our minds of some assemblage of circumstances which may be called an image. These images must be either simple, as a rose; or collective, as a tribe of men, an army, or a scene in nature. These images do not arise spontaneously in our minds, but require some stimulus to reproduce them. Thus the smell of a rose may reproduce to our minds a whole garden of roses; the sight of a black man may reproduce to us the idea of a nation of savages; a red coat or a sword may remind us of an army; or the chimney of a single house may remind us of a whole village.

In proof of the effect upon the brain being similar in case of thought to that of actual sight, smell, taste, or feeling, witness the man who faints away at the description of a wound, or the sensation of pain some men experience at the idea of a train passing over any part of the body. If only the image is sufficiently distinctly produced, the sensation will be felt. A proof of this is found in the man who died of cholera after being placed in a bed in which he was told a cholera patient had died, though there really was no truth in the statement, no such patient having been in the bed.

By this process of mentation we shall see reason for the mental phases known as an alcoholic, bilious, hysterical, phthisical, gouty, or nicotised opinion. In support of this vascular theory of mentation we may appeal to the slow rate of conveyance of impressions as compared with electrical effects. (See Barnett's paper in the *Intellectual Observer*, June, 1866.)

The pathological interest of these suggestions will be at once manifest when we come to inquire into the relation of grey matter to the mental history of the patient. I have observed a vast difference in the distinctness of cortical structure in different subjects, but my experience does not enable me to lay down any rule. It is obvious that will, mental perception, sensation, and memory are each separate functions of the mind, and may hereafter by tabulated experience be brought to be associated with certain anatomical appearances. The researches of such men as Turner of Edinburgh will tend to elucidate the question. Again, the pathology of insanity would be much assisted by such investigations, and the surprise at so little morbid change of cerebral structure in certain cases of unsound mind would cease if we were more accustomed to look for the exciting cause in ganglionic centres, rather than in brain itself.

By this vascular theory of mentation it will be seen how the greater part of the operations of the nervous centres is of the nature of a reflex act, while only a small sphere is left for the action of the will, which remarkably coincides with the investigations of all psychologists, from St. Paul and Socrates to Buckle, Comte, Stuart Mill, Goldwin Smith, and Ferrier. Moreover, the theory goes to elucidate the secondary automasis of Carpenter, by supposing that capillaries frequently, having received a similar stimulus, are enabled to reproduce, almost without will and on the slightest provocation, a result to which, by their anatomical relation, they would, by a law of frequent use, become fitted to bring about.

There is one other pathological point of interest connected with the action of the sympathetic nerve to which attention may be drawn as a suggestion for further inquiry. There are certain sensations, not of pain, but rather of constriction or dragging, which are associated with affections of organs under the influence of the ganglionic nerves, and as we know that the whole chain of ganglia is connected by innumerable ramifications, we may see reason to account for the following sensations as the result of impressions on certain ganglia, the more so that the stimulation of a ganglionic nerve is not directly productive of pain as is the stimulation of a cerebro-spinal nerve.

To begin with globus hystericus. The ganglia supplying the uterus, ovaries, and genitals may communicate, when irritated, a stimulus to the thyroid ganglion. The dragging in the left side associated with leucorrhœa (solar plexus). Distended bowels in hysteria (solar plexus). Oppression of præcordia in fissured anus and hæmorrhoids (solar plexus). To these may be added the sense of constriction experienced after the subcutaneous injection of morphia, to say nothing of the vomiting of pregnancy and the various sympathetic affections in brain, kidney, liver, and enteric disease.

In conclusion it may be suggested that the ganglionic system in connexion with disease has, perhaps, hitherto hardly received that amount of attention which its important position and magnitude would seem to call for.

Lancaster, Sept. 1868.

# A Mirror
## OF THE PRACTICE OF
# MEDICINE AND SURGERY
## IN THE
# HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## ROYAL FREE HOSPITAL.

### CASES OF RAILWAY INJURY.

(Under the care of Mr. J. D. HILL.)

WE resume this week the description of several cases of severe injuries amongst railway officials, of which we gave two examples last week. The series illustrates very well the influence of shock from violence when combined with a varying amount of local injury.

CASE 3. *Compound fracture of left leg; amputation below the knee; recovery.* — John G——, aged thirty-one, a railway porter of good constitution, was admitted into the hospital on Oct. 15th, 1867, having been knocked down and run over by a train in rapid motion. When admitted, he was much collapsed, the pulse and breathing being hardly perceptible, the countenance pale, and the surface of the body covered with cold sweat.

*Examination of the limb.* — The integument over both malleoli, and extending towards the knee, was lacerated, and blood effused between this structure and the muscles halfway up the leg. The deep fascia was laid open, extensor tendons torn from their muscular attachment, and anterior tibial vessels and nerve ruptured in the middle third of the leg. The tip of the internal malleolus was broken off, and two inches above the external malleolus the fibula was cracked across. The ankle-joint was laid open, and the astragalus split vertically.

*Treatment and progress.*—Stimulants were given freely, and in the course of an hour, by which time he had rallied, Mr. Hill performed amputation below the knee by the circular method. At the anterior and external part of the circle the integument was found bruised, and slightly detached from the deep fascia by clotted blood; the precaution was, however, taken to secure plenty of covering. Pretty sharp reaction set in during the three following days, and by the fifth day the respiratory and circulating systems had regained their equilibrium. The last ligature separated on the fifteenth day, and the stump healed partly by adhesion and partly by granulation. He progressed without a bad symptom (except that a small portion of the bruised integument lost its vitality and was cast off), and was discharged in good health on Nov. 30th, 1867. The stump at that time was quite sound; there had been no retraction, and the cicatrix was three inches in length.

*Remarks.*—Here again the train was travelling at a rapid speed; hence the coexistence of severe shock with local injury. With respect to the injuries, it may be observed that the anterior tibial vessels and nerve were ruptured in the middle third of the leg, and that the extensor tendons were torn from their muscular attachments. The yielding integument was detached from the deep fascia, even as high as the line of amputation. These circumstances will be explained by the shape of the wheel, and the comparative elasticity of the several structures.

The next case illustrates severe shock and general concussion, with extensive capillary rupture and local injury.

CASE 4. *Compound fracture of tibia and fibula; amputation of thigh; death; autopsy.*—James F——, aged thirty-eight, a

railway porter, of healthy constitution, was admitted into the hospital on Sept. 5th, 1867, having been knocked down and run over by a train in rapid motion. On admission, he was very much collapsed, and was said to have lost a good deal of blood. The soft parts were much damaged, the integument being detached as high as the popliteal space; the deep fascia was extensively lacerated; the muscles were ruptured, and the bones broken in their upper third; the main vessels were torn across in the middle third of the leg; and there was oozing from the soft parts. As the hæmorrhage was general and the limb considerably swollen above the wound, when the patient had somewhat rallied, Mr. Hill amputated the thigh in its middle third by the antero-posterior flap method. The patient, however, showed no symptoms of decided reaction, and died Sept. 6th, thirty hours after the accident.

*Autopsy.*—The internal organs were generally healthy. In the muscles of the chest, abdomen, and head, numerous vascular points were observed, about the size of a pin's head, and here and there minute clots, somewhat larger than these points. In the brain and muscular substance of the heart the same vascular points thickly studded both structures. The cavities of the heart contained semi-fluid black blood. The lungs, liver, spleen, and kidneys presented the same appearance as that observed in the brain and heart.

*Examination of limb after amputation.*—The popliteal artery and vein were torn across about the middle of the space, which was filled with clot. The gastrocnemius and plantaris muscles were dragged from their origin; and the internal popliteal nerve was ruptured at the apex of the triangle.

*Remarks.*—Now let the points in this case be briefly considered. Shock and general concussion consequent upon the rapid speed of the train were well exemplified by the symptoms during life, and subsequently by the post-mortem appearances. The local injuries were, as in the former cases, very severe; but the special lesion of the arteries required immediate consideration. Firstly, the vessels were torn across in the middle third of the leg, and secondly, there was rupture of the popliteal vessels. Here, then, was a twofold necessity for operative assistance. In addition to these injuries, the flexor muscles were dragged from their origin, and the internal popliteal nerve was broken across at the summit of the popliteal space—in themselves facts representing the violence which the soft parts had sustained beyond the spot where the destructive agent actually crossed the limb. The post-mortem appearances of general capillary rupture throughout the internal organs and the general muscular tissue are very instructive in regard to the extreme concussion which the body had incurred.

The last case illustrates general concussion, shock, and local injuries, followed by complications, the result of injury to the main vessels.

CASE 5. *Compound dislocation of both ankle-joints, with extreme injury to the soft parts; primary amputation of both legs; acute gangrene; death; autopsy.* — John W——, aged thirty-three, a railway guard, of good constitution, was admitted into the hospital July 17th, 1867, having been knocked down and run over by a train in rapid motion. When seen a few minutes after the accident he was suffering from extreme shock, but in the course of an hour the return of warmth to the surface of the body, the increase of volume and frequency of the pulse, and the arterial hæmorrhage from the injured extremities, gave evidence of reaction. His feet were both smashed and dislocated at the ankle, on the right side inwards and on the left outwards, in either case hanging by shreds of skin. The integument was torn away several inches above the joints, the tendons were detached, and the vessels and nerves ruptured. Under chloroform, Mr. Hill performed primary amputation in the lower third of both legs, by the circular method on the right, and by the posterior flap on the left, regulating the incision by the amount of sound integument to be obtained.

July 18th.—Has passed a fair night; reaction is good.

20th.—Pulse 120; respiration 40; delirious; acute gangrene has attacked both stumps; blebs have formed as high as the knee; both limbs much swollen and tense; flaps black and gangrenous.

21st. — Delirium abated; gangrene is rapidly extending towards the trunk. Died at 12 o'clock.

*Treatment.*—Locally, free and deep incisions were carried through the soft parts to relieve tension; all the sutures were removed. The limbs were maintained in an elevated position, and encircled in cotton wool. Bark and ammonia in full doses were prescribed, with brandy, eggs, beef-tea, &c., by mouth and rectum.

*Autopsy, sixteen hours after death.*—Muscles of the head, chest, abdomen, and lower extremities studded with vascular points. The same appearances were observed in the brain, spinal cord, muscular tissue of the heart, liver, kidneys, and coats of the bladder. The meninges were very opaque, and separated from the brain by subarachnoid fluid; the cavities of the heart were filled with decolorised clots, and the lungs were congested. The internal organs were otherwise healthy in structure.

*Femoral arteries.*—These vessels were found lacerated in Hunter's canal—the right artery in the upper part, the left in the lower part of the canal,—the rents respectively extended through their internal and middle coats in a transverse direction, and involved a little more than one-half their calibre. The space between the broken edges was occupied by plastic lymph of firm consistence; and, on removing the arteries from their beds, they were found to be pretty firmly adherent to the muscles by lymph, which had been thrown out external to their outer coats. These were intact. On opening the vessels, an embolus was traced downwards to the extremities and upwards into the common iliacs. The veins, also, were plugged in the same situation; but the plugs were much softer, more irregular in shape, and not quite decolorised.

*Remarks.*—Now in this case the man was knocked down and run over by a train in rapid motion. Hence, excessive shock, great general concussion, and local injuries; further, there was laceration of the arteries at a distant part of the limbs, which was not detected during life owing to the absence of local symptoms, and the free supply of blood to the extremities, as seen at the operation. When, however, reaction set in, and the vessels were called into increased play, plugging occurred probably at the seat of arterial injury, followed by gangrene and death. It may seem remarkable that no local signs were developed to indicate arterial injury; but perhaps the explanation is, that when the breach in the arteries occurred, extreme shock arrested the arterial flow, or at any rate lessened it so considerably as to allow of the formation of a plug. This, with the integrity of the external coats, may have prevented yielding to any extent. Further, the fact of the breach being situated at the outer part of the vessels (which were so deeply imbedded in muscle) would render it doubtful, if there had been any slight impulse or tumefaction, whether it would have been detected during life; at any rate, the post-mortem evidence would lead to this conclusion. The effects of general concussion there again were well marked by capillary rupture in nearly all the organs of the body. Lastly, it may be asked why nothing has been said about primary hæmorrhage after the receipt of such severe injuries. Now it is well known that shock in many cases prevents it; and in others the manner in which the arteries are torn or dragged out causes retraction of their inner and middle coats, and thus the vessels become sealed up; but where the injuries are chiefly local, and there is little shock, hæmorrhage does occasionally take place. In the majority of such instances the railway officials have sufficient sagacity to compress the limb at the seat of injury by means of a handkerchief, a piece of wood, buckle, or strap; and thus in many cases an inconsiderable quantity of blood is lost previous to the patient's admission into the hospital.

## UNIVERSITY COLLEGE HOSPITAL.

### SYMMETRICAL TUMOURS OF THE ANGLES OF THE LOWER JAW; REMOVAL; RECOVERY.

(Under the care of Mr. CHRISTOPHER HEATH.)

THE following case is of great rarity and considerable interest, since the patient exhibited a remarkably symmetrical enlargement of the angles of the lower jaw, which appeared to depend upon a myeloid growth, expanding the outer plate of the bone, and extending for some distance into its substance. The removal of the prominent tumours, with as much of the softer growth as was practicable, appears to have been followed by success, since a twelvemonth has elapsed without any return of the disease.

William H——, aged seven, was admitted into ward No. 1, September 9th, 1867, with an enlargement of both angles of the lower jaw. The mother stated that she had first noticed the enlargement on one side (right?) when the boy was eighteen months old, and from that time the jaw had gradually grown to its present form without giving the child any pain. He had been rickety in the legs, and had been under treatment for this at the Children's Hospital. On admission, the boy presented the appearance shown in the first figure, the width of the jaw as measured with calipers being five inches. The

tumours were hard and incompressible, and did not involve the cavity of the mouth, the mucous membrane being reflected from the alveolus above the level of the growths. The growths had decidedly increased in size during the six months the boy had been under Mr. Heath's observation, and he therefore determined to remove them.

Sept. 11th.—The patient being under the influence of chloroform, Mr. Heath made an incision over the right or larger tumour, and, having divided and tied the facial artery, exposed the tumour, and scraped off the periosteum with the handle of the knife. The surface was dense bone, evidently the outer compact plate of the maxilla; but it yielded slightly on pressure. With a small saw the most prominent portion of the tumour was readily removed, and subsequently a second slice; and then, with the bone-forceps and gouge, as much of the remaining semi-cartilaginous structure as could be reached was taken away without interfering with the alveolus or opening the cavity of the mouth. The inner plate of the maxilla appeared to be unaltered, and at the end of the operation not more than the normal thickness of jaw remained. As the surface of the bone bled freely, it was lightly touched with the actual cautery, and the wound was filled with lint. The wound suppurated healthily, and soon contracted, the boy being about again in a few days.

On the 2nd of October Mr. Heath removed the growth on the left side in the same manner as before, the tumour being of a precisely similar character. The boy made a rapid recovery, and was discharged, with the wounds nearly healed, on the 16th of October, 1867.

The growths were carefully examined by Mr. Alex. Bruce, who pronounced them distinctly myeloid in structure.

The accompanying figure, from a photograph, shows the condition of the patient three months after the operation. The

boy called at University College Hospital on September 16th, 1868, when his face was found to be *in statû quo*.

# Provincial Hospital Reports.

## SOUTH DEVON HOSPITAL, PLYMOUTH.

OVARIAN DROPSY OF ONE YEAR'S DURATION; OVARIOTOMY.

(Under the care of Mr. FOX.)

FOR particulars of the following case we are indebted to Mr. Francis Lovell, house-surgeon.

Mrs. J——, aged fifty-three, a widow, mother of three children, the youngest eighteen years old. She has had several miscarriages. Catamenia disappeared twelve years since. She first noticed enlargement of the abdomen on the right side twelve months ago. At first the enlargement was gradual, but of late had been much more rapid. The swelling was at first confined to the right side, and was rather hard and round; gradually it extended over the front to the left side of the abdomen; it was never painful, and till lately gave her but little inconvenience. Latterly she has suffered a good deal (especially at night) from dull aching pains in the legs, and has had occasional incontinence of urine. She is a short woman, and rather emaciated, but is in very good health and spirits. She now measures thirty-seven inches round the abdomen. She has never been tapped, and has been under no treatment. The swelling occupies the whole of the front of the abdomen; it bulges considerably more on the right than on the left side; its surface is uneven, and feels like a multilocular cyst; it is quite dull to percussion all over.

About a month after her admission, the cyst was extirpated in the usual way. An incision four inches long was made through the linea alba, commencing an inch below the umbilicus, and extended towards the pubes. The peritoneum having been divided upon a director, the cyst immediately came into view; a trocar was introduced, and several pints of clear, rather tenacious fluid were evacuated; the cyst was then seized and removed out of the abdomen, and, there being no adhesion, this was an easy matter. The pedicle was about four inches long, and two inches wide. A clamp was applied to this, and it was divided by means of the actual cautery. There was no bleeding at all, so the pedicle was at once returned into the abdomen. The wound was closed with four sutures, a pad of cotton wool applied over it, and a many-tailed flannel bandage fastened round the abdomen. The operation lasted about a quarter of an hour. After its removal the cyst was found to be a multilocular one, and, after all the fluid was removed, weighed seven ounces and three drachms.—8 P.M.: About eight ounces of clear urine have been drawn off with the catheter. She complains of smarting pain across the abdomen. Pulse 100, soft, fair power. Tongue clean and moist. Skin perspiring. No sickness. She has had two ounces of strong beef-tea injected into the rectum, and this is to be continued every four hours. She takes a little iced water, and cold toast-water.

August 5th.—Little sleep during the night, but quiet. She complained of more pain in the abdomen, so a linseed-meal poultice was applied, and is to be continued. Pulse 94, soft. Skin perspiring. Tongue clean and moist. Urine freely secreted, and catheterised. The beef-tea enemata are regularly continued, with five grains of quinine in each. She also takes a little arrowroot.—11 P.M.: Still perspiring freely. Thermometer stands at 70° Fahr. Less pain in the abdomen. She finds the poultice a great comfort. Pulse 96, good power.

6th.—Slept well through the night. Pulse 94, good power. Tongue clean and moist. She takes the beef-tea and arrowroot now well, and it causes no nausea, so the enemata are discontinued.

From this time the progress towards recovery was uninterrupted.

# Reviews and Notices of Books.

*On Varicose Disease of the Lower Extremities, and its Allied Disorders: Skin Discoloration, Induration, and Ulcer.* Being the Lettsomian Lectures delivered before the Medical Society of London in 1867. By JOHN GAY, F.R.C.S., Surgeon to the Great Northern Hospital, &c. 8vo, pp. 171. London: Churchill and Sons. 1868.

IT is refreshing, among the books that crowd the reviewer's table (books in which, too often, Dr. A or Mr. B sets forth some simple and easy cure for maladies which are quite likely, in spite of them, to trouble and perplex future generations), to find a volume containing the results of earnest and laborious clinical and pathological investigation, and the inferences to which such work has led. The post-mortem examination of varicosity has hitherto been much neglected; and it has been reserved for Mr. Gay, by careful dissection of diseased limbs, to obtain evidence which sets aside many preconceived and long-established notions, and which places our knowledge of

varicosity, of its allied disorders, and especially of its connexion with ulcer, upon a true and scientific basis.

We regret to say that the author's researches, although they explain the reason of the many failures in treating varicosity, do not hold out much hope of a greater measure of success in future. But, for practitioners, they have this great and certain value: they show what it is practicable to accomplish, and the means by which the amount of improvement possible in any given case may be brought about; they will guard against hopes doomed to disappointment; and will enable the surgeon clearly to foretell the results that his art can compass. On this ground we would counsel all those for whom the subject has practical interest to obtain Mr. Gay's book and to master its contents.

The work is printed on toned paper; is illustrated by lithographs that are instructive, although not very artistic; and bears upon every page the impress of an anatomist and surgeon who is master of his craft.

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*Life of Sir John Richardson, C.B., LL.B., F.R.S., Inspector of Naval Hospitals and Fleets, &c.* By the Rev. JOHN M'ILRAITH, Minister of the English Reformed Church, Amsterdam. Small 8vo, pp. 280. Longman and Co. 1868.

To the practised writer the history of the life of Sir John Richardson would be an enviable subject. His career as a physician, a naturalist, and an explorer abounds with matter of interest; and the man himself, in all his sound-minded qualities, is a charming study. Rightly to deal with the eventful career of his life, his adventurous explorations, his scientific labours, and his social characteristics, would require literary ability of no ordinary kind. It so happens, however, that his biographer possesses but one qualification for his task, and that is a thoroughly honest admiration of the man. Mr. M'Ilraith was ill-advised when he undertook to write Sir John Richardson's life. He lacks altogether the aptitude of appreciating those traits of character which especially distinguished the man in his professional and public life, and it is only as a God-fearing individual that he seems to comprehend him. This is perhaps natural to a minister of religion; and if Mr. M'Ilraith had published the life of Sir John Richardson as a contribution to religious biography no exception could have been taken to it. But to merge the physician, the naturalist, and the explorer, in the religious aspect of life, was to do an injustice to the subject of the biography, unless the special nature of the work was stated at the outset. Apart from the information concerning the thorough God-fearing characteristics of Sir John Richardson, and the unadorned thread of dates and meagre facts by which the continuity of the story is held together, Mr. M'Ilraith's biography consists of a patchwork of extracts from the published works of Sir John Richardson, and from letters. This patchwork is so far valuable as it enables the otherwise uninformed reader to gain some conception of Sir John Richardson's character, but it is too inartistically manipulated to satisfy the awakened desire to learn more. Notwithstanding, however, defects of manner and arrangement, in the absence of a more elaborate production, this biography is not without interest. It is especially to be commended to the notice of students, for the senior and the junior will alike find profit in its pages. Sir John Richardson's life may well be set before them as an example, and that aspect of it which most enlists the biographer's sympathy cannot hold too prominent a place in their memories.

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*On the Treatment of Aneurism by Iodide of Potassium.* By GEORGE W. BALFOUR, M.D., F.R.C.P.E., Physician to the Royal Infirmary, &c. Edinburgh: Oliver and Boyd. 1868.

DR. BALFOUR'S paper was read to the Medico-Chirurgical Society a few months ago, and it deserves some attention from its practical character. Several physicians in this country, and elsewhere, have stated it as their opinion that iodide of potassium exercised a very beneficial, and sometimes a decidedly curative influence in cases of aneurism. Dr. Balfour relates three cases, and he reviews the experience which has been obtained from the use of this drug in fifteen recorded cases.

He advocates the administration of the iodide in full doses—say thirty grains, occasionally intermitting it for a day or two on the occurrence of any unpleasant symptoms attributable to its action; and he carries on this treatment for several weeks, or months, during which the patient is confined to the recumbent position, and placed upon a somewhat restricted diet. We need not enter fully into the mode of action of the iodide. Dr. Roberts and Dr. Chuckerbutty consider it to increase the coagulability of the blood; while Dr. Balfour, looking to the remarkable and almost immediate relief to the pain resulting from the ingestion of an efficient dose, believes the primary action to be that of a sedative to the nervous system, the coagulation of the blood in the aneurismal sac being secondary. We agree with Dr. Balfour in thinking that the evidence is, at any rate, sufficient to warrant a more extended trial of this method of treatment.

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*Holden's Manual of the Dissection of the Human Body.* Edited by LUTHER HOLDEN, F.R.C.S., Surgeon to St. Bartholomew's Hospital, &c.; and JOHN LANGTON, F.R.C.S., Assistant-Surgeon and Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital, &c. Third Edition. Small 4to, pp. 604. London: Churchill and Sons. 1868.

THE publication of a third edition of this manual is a sufficient indication of the favour in which it is held among students. The present edition has been carefully revised, and new matter added where requisite; but chiefly in respect of the anatomy of the brain, organs of senses, and abdominal viscera. The style is clear, the typography excellent; but the majority of the illustrations are defective in artistic merit. This is to be regretted in a work otherwise so good.

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## THE SEWAGE WORKS AT STROUD:

### DISINFECTION BY BIRD'S PROCESS.

WE have been requested to inspect the method of treating sewage that has been patented by Dr. Bird, and that is now in operation at Stroud, in Gloucestershire. The results obtained there are sufficiently satisfactory to warrant a description, and a further trial elsewhere.

The works at Stroud are situated about half a mile from the town, and were originally constructed for a lime process, differing materially from that which is now employed. The disinfecting agent is a sulphate of alumina and iron, obtained by treating a ferruginous clay with sulphuric acid, and then drying and pulverising the result. The stream of sewage, on arriving at the works, is made to turn an immersed wheel by the force of the current. Above this wheel is a hopper, by which the "sulphated clay" powder is suffered to fall into the sewage at a definite rate, and the wheel mixes it thoroughly with the liquid, which then passes on into a large tank. In this tank a certain degree of separation takes place. The heavier portions of the sewage subside quickly, carried down by the fall of the clay. The lighter portions—hair, feathers, fat, and other substances—float on the surface, and are removed by skimming. The middle stratum of the liquid is, therefore, comparatively clear; and an outlet is provided at about half the depth of the tank, by which this middle stratum is suffered to escape, at the same rate as that of the admission of sewage. The escaping middle current receives from another hopper a second dose of sulphated clay, and then passes into a second tank. From this it ascends through a charcoal filtering bed to a third tank, and from the third tank through a similar

bed to a fourth. From the fourth it escapes as "outfall water," and is suffered to pass into a neighbouring stream.

The tanks in which this process is carried on are arranged in two parallel lines, each line containing a complete series. The inlet is so placed that the entering stream of sewage can be turned into either series at pleasure; and thus, as soon as a sufficient quantity of deposit has accumulated in one set, the sewage is diverted into the other, and the first set is emptied for cleansing. The deposit thus obtained, and the skimming of the first tank, are spread out upon drying beds, and covered with a thin layer of the sulphated clay powder. When sufficiently dry, the whole is collected, and forms the basis of a manure that is compounded and sold by the Company.

The question of the disinfection of sewage is so totally distinct from the question of utilisation (the former being a matter of absolute necessity, and the latter being only something that is desirable if it can be accomplished), that we feel it no part of our duty, as medical journalists, to express any opinion upon the value of the residue that is deposited in the tanks at Stroud, or upon the value of the artificial manure of which it is the basis. We are informed that the latter is sold at £8 per ton, and that it is largely exported to the West Indies for use in sugar plantations. We have seen some potatoes and other crops, raised by its assistance in the neighbourhood of the works by the men employed there, which certainly surpassed in vigour and general aspect the crops upon the neighbouring fields. But we have not the data for any rigorous comparison, and we have no desire to enter upon a purely commercial question.

It falls within our sphere, however, to express an opinion upon the sanitary aspects of the matter—first, as regards the work that is carried on; and secondly, as regards the qualities of the liquid that is suffered to escape. On both these points our report must be highly satisfactory.

The works at Stroud may be fairly said to be free from offence. In the words of Mr. Bazalgette, who has lately visited and reported upon them, "the processes of deodorising and manufacturing the manure cause no nuisance, and may be carried on in the immediate neighbourhood of dwellings." The sulphated clay acts at once as a deodorising agent; and the only period at which any smell is given off is during the short time occupied in cleansing the tanks. Even this is not perceptible at a few yards away from them; and the drying beds, covered with the sulphated clay powder, may be described as almost inodorous.

The outfall water, as it escapes from the last tank in order to flow away into a neighbouring stream, is free from anything unpleasant to the senses. It has a slight yellowish-brown colour, due to suspended oxide of iron, and is free from odour. It was swarming at the time of our visit with the larvæ of the common gnat, such as are found in water-butts; and seemed therefore, *a priori*, to be harmless to animal life. But as gnat larvæ are possibly not particular, we caused a careful analysis to be made of the entering sewage and of the outfall water, and of this the following were the results:—

SEWAGE.

Specific gravity, 1000·38.

*Physical characters.*—Contains a small quantity of black matter, which readily subsides, leaving a liquid of a deep yellowish-brown colour. Reaction alkaline.

*Composition of the Supernatant Liquid.*

| | Grs. per Imp. Gallon. |
|---|---|
| Mineral matter | 23·21 |
| Volatile and combustible matter | 8·06 |
| Total solid contents | 31·27 |
| Oxidisable organic matter | 5·12 |
| Ammonia | 2·48 |
| Nitric acid, a very small quantity. | |

The 23·21 grains of mineral matter contained 0·896 grains of phosphoric acid.

*Composition of the Deposit.*

| | Grs. per Imp. Gallon. |
|---|---|
| Mineral matter | 9·50 |
| Volatile and combustible matter | 12·48 |
| | 21·98 |

The 9·50 grains of mineral matter contained 0·61 grain of phosphoric acid.

OUTFALL WATER.

Specific gravity, 1000·19.

*Physical characters.*—Contains a very minute quantity of matter in suspension. The clear liquid possesses a slightly yellowish-brown colour. Reaction slightly alkaline.

*Composition of the Water.*

| | Grs. per Imp. Gallon. |
|---|---|
| Mineral matter | 25·11 |
| Volatile and combustible matter | 1·82 |
| | 26·93 |
| Oxidisable organic matter | 0·736 |
| Ammonia | 0·560 |
| Phosphoric acid | 0·063 |

The matter in suspension had the following composition:—

| | |
|---|---|
| Mineral matter, chiefly oxide of iron | 0·17 |
| Volatile and combustible matter | 0·11 |
| | 0·28 |

Nitric acid, a tolerable quantity.

Now, on comparing these two analyses, and putting together the solid and liquid portions of each sample, we find that the sewage, before treatment, contains 53·25 grains per gallon of dissolved and suspended matter; among which there are 2·48 grains of ammonia, and 1·506 of phosphoric acid. The outfall-water contains only 0·560 grains of ammonia, and 0·063 of phosphoric acid. We may infer that four-fifths of the ammonia have been completely oxidised, and that twenty-four twenty-fifths of the phosphoric acid have been thrown down in combination with alumina. The oxidation of the ammonia has been so complete as to issue in the production of nitric acid; and the rest of the oxidisable organic matter has almost disappeared. Of the mineral matter dissolved in the outfall-water, a large portion consists of the sulphate of alumina added to it in the process.

From this we may arrive at the conclusion that the outfall-water has been rendered innocuous—in so far as innocuity can be tested by any means now at the disposal of the chemist. Behind this reservation lies the great question of noxious germs; which at present we detect only by their effects. We cannot venture to affirm that the outfall-water at Stroud has been freed from them, because we do not know the conditions that limit and govern their vitality. But it would be a great step towards the simplification of pressing sanitary problems if we could ensure chemical purification, and could confine our future search for the causes of disease in water to matters that lie beyond chemical ken. So much as this the Stroud company can accomplish; and on this ground we cordially recommend an extension to other places of the plans there successfully pursued.

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HYDROPHOBIA.—During the years 1854 and 1855 the deaths registered in London from hydrophobia were 7 and 2 respectively; in 1856 none; in 1857 two; from 1858—62 none; in 1863 three; in 1864 none; in 1865 nine; in 1866 eleven; and in 1867 three. No fatal case occurred in the first six months of the present year. Of the eleven deaths occurring in 1867, two happened in the March, three in the June, three in the September, and three in the December quarters. During the ten years 1847–56 the deaths from hydrophobia in all England amounted to 129; in the succeeding decenniad (1857–66) the number was 88, of which 36 occurred in 1866.

# THE LANCET.

LONDON: SATURDAY, SEPTEMBER 26, 1868.


WE are not of the number of those who have lost much sleep over the conclusion of Dr. HUGHES BENNETT and his able coadjutors, that mercury is not a cholagogue, at least in the case of dogs. The conclusion did not come upon us as a discovery. It had already been pretty well rendered unavoidable by the experiments of others, as of Dr. GEORGE SCOTT, MOSLER, Dr. C. H. JONES, Dr. INMAN, and Dr. THUDICHUM. In the history of this question Dr. THUDICHUM's clear language in 1863, in his treatise on Gall-stones, should be remembered: "Calomel is not a cholagogue, but diminishes the secretion of bile." The subject, moreover, was one upon which experience showed that the opinion of the profession itself was undergoing change and qualification. Medical men were more accurately distinguishing different cases of jaundice; they were coming to see that it was an error to consider every undefinable derangement of the prima via as necessarily and simply "bilious;" that, in fact, as the function of the liver is one of the most difficult and nice problems in physiology, so the symptoms which arise from disorder of this function require to be carefully differentiated. Many other remedies have been found efficacious where mercury once used to have unrivalled preference, especially salines, simple purgatives, mineral acids, taraxacum, quinine in some cases (particularly painless and passive functional forms of jaundice often met with in summer). These remedies were found to be, therapeutically, not only as efficient as mercury, but without many of its objectionable qualities. It is not surprising that the cholagogue power of mercury has been so long taken for granted. The medicine has been generally associated with other purgatives, the use of which is followed by an increased secretion. It is only of comparatively late years that it was practicable to differentiate with any accuracy the bile from the numerous other secretions which are poured, under the influence of purgatives, into the intestine.

The authoritative physiological disparagement of a belief so generally entertained as was that of the power of mercury to increase the flow of bile leads us to a few general observations on the whole question of the therapeutical reputation of this medicine, for which British and American physicians have had a singular reverence. The first remark we would make is of a piece with one we have already made in connexion with Dr. BENNETT's report, that we must not attach too much importance to a merely physiological conclusion. We are physicians as well as physiologists. We have to do with pathological conditions—with diseased states as well as healthy ones. And we are still entitled to use mercury therapeutically in cases where, empirically, it has been found to do much good and no harm. We fondly hope for the ultimate reconciliation of physiology and empirical observation; but that time is not yet. And meanwhile even physiologists will admit that the action of medicines is very much modified by disease. In all this we are not speaking as apologists for the medicinal use of mercury; we look with entire satisfaction on the greater care and infrequency with which it is employed in medical practice. The sequel will show that we do not blindly believe in it, and that we have great doubts about other powers with which the medicine is credited. Still we want opinion on the matter to be regulated by strict and sound evidence.

There is, indeed, little reason to fear that the use of mercury will suddenly or seriously alter at the bidding of any mere physiological experiments on dogs. The acknowledged powers of the drug are too remarkable, we might almost say mysterious, for men suddenly to relinquish the hope of getting greater uses out of it than have yet been obtained. Within late years the medicine has been given in large doses by some continental physicians in typhoid fever, of all diseases in the world! We merely mention this fact to show that men will not be hindered by abstract considerations from the therapeutical use of a medicine. Anything more apparently incongruous than the use of large doses of calomel in a disease like typhoid fever could not occur to the mind of man. Yet it has occurred, and has been put into practice,—it is said, with the result of *arresting* the disease in a large number of cases. It is significantly stated that in cases characterised by nervous derangement, or of the adynamic type, the symptoms were aggravated by the medicine. Such statements will not do much to induce men to employ mercury in typhoid fever.

It is of greater importance to consider the use of mercury in diseases in which it would appear to be a far more congruous remedy, and in the cure of which it has had the highest reputation. First and foremost in this direction is the value of mercury in syphilis. And here the champions of empiricism have still a great advantage over mere chemists and physiologists. It remains true that mercury has a perfectly unexplained, almost mysterious, power in various forms of secondary syphilis; and that men disposed to do without it have ever and anon to come back to it in cases where every other medicine has failed. Sir BENJAMIN BRODIE viewed this subject with his usual moderation and soundness of judgment, and said in one of his lectures, "Experience proves to me, and I am sure it will prove to you also, that we have hitherto found no remedy having the same power of extinguishing the venereal poison as mercury." It is doubtful whether anything has yet transpired to materially disprove the wisdom of these words. It is true that many cases of secondary syphilis seem to do very well without mercury. It is true, also, that we have learnt that we can get far more good out of small quantities of mercury than was thought; and that the modes of administering it, and the preparations of it, least apt to salivate are most apt to do good; but it yet remains clear to all sensible and practical men that mercury is a most valuable remedy in secondary syphilis, especially in the infantile forms of it, and in those adult forms which resist the influence of other remedies.

Quite as important—as a point of medical doctrine—as the remedial power of mercury in syphilis, is the question of its power as a remedy in inflammation. And here it is to be admitted that very serious changes in our belief are necessitated by recent experience and a more close and careful clinical study of disease. It is amply proved that pneumonia does well in the large majority of cases without mercury; and this in cases in which the physical indications of the disease and the acknowledged competence of the physician exclude all

doubt on the point of diagnosis. The series of cases published respectively by Professor BENNETT and Dr. WATERS of Liverpool, and the experience of other physicians, amongst whom we might mention Dr. MUIR, reported in our own columns, leave no doubt as to the rapid and satisfactory dispersion of extensive consolidation of the lungs without the exhibition of mercury. The reputation of mercury, or rather of its constitutional action, was still greater in the inflammations of the serous membranes of the pleura and the peritoneum. But it is certain that its necessity here has been overrated, and that many physicians of deserved authority have discontinued the mercurial, and certainly the salivating, treatment of such diseases. FLINT, of America—a very high authority in diseases of the chest,—says of the use of mercury as a sorbefacient, "I have long ceased to employ it for this end." In regard to peritonitis, FLINT speaks with a caution that will secure only more regard for his words; but they are unmistakable in their import. After extolling the importance of opium in this disease, as in pleuritis, he confesses that mercury has not for years entered into the treatment of cases of which he has had charge. The use of mercury in pericarditis has long been an accepted practice, and been eulogised by great authorities; but the inutility of the practice is already established. A more satisfactory treatment of rheumatic fever, and the ascertainment of the frequent connexion of pericarditis with deteriorated conditions of the kidney and of the blood, have tended to withdraw the minds of physicians from the mere object of absorbing effusions of lymph. It is clear to us that the reputation of mercury has been more shaken as an antiphlogistic remedy than as an antisyphilitic one. The iconoclastic generation that has almost abolished bloodletting in inflammations, has almost lost its reverence for mercury. We have said little of the less important purposes for which mercury is used in general practice. Our concern is with the great doctrines of Medicine, not with the detailed practices from which patients or their medical advisers find benefit. There are numerous external uses of mercury which cannot be too highly praised. But our space is already exhausted, and details here would be beyond our purpose.

There is a remarkable property of some mercurial preparations, in virtue of which, in small doses, they assist or seem to ensure the action of diuretics. The value of this property in practice, especially in certain cases of disease of the heart, with chronic bronchitis and hardening and enlargement of the liver, and anasarca, is very apparent. Let anyone who doubts this read Dr. STOKES'S account of Mr. COLLES'S case in his book on Diseases of the Heart, and try the treatment in similar cases. This action of mercury would be worthy of the attention of the Clinical Society in the ensuing winter. The pathological conditions for testing it are only too plentiful in our hospitals every winter.

From what we have said, it must be admitted that the clinical value of mercury has yet to be accurately defined, and that in the meantime men will do well to use it very carefully. One thing is certain, that salivation and the irritating effects of mercury are to be avoided. One of the most significant facts we have noticed is the description of the therapeutical uses of calomel in the new Pharmacopœia of India, which lies before us. Indian practitioners have always been great upholders of the curative powers of mercury. But in regard to its antiphlogistic use, even their faith seems on the wane, and the Indian Pharmacopœia commends only its purgative properties in the early stages of inflammation. Another significant fact is the quantity directed to be given in this Pharmacopœia—from one to two grains as an alterative, and from two to six grains as a purgative. This is surely as great a departure from the heroism of old Indian practice as much of our present English therapeutics is from the classical practice of our predecessors.

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IN discussing the provisions of the "Contagious Diseases Act" of 1866 (THE LANCET, Sept. 29th, 1866), we remarked: "The great feature is the introduction of *periodical medical examinations* of women engaged in prostitution, with the view of detecting disease at the earliest possible moment, and thus preventing its spread." It is, therefore, a subject of regret and astonishment to us to find that, at the end of two years, we are no nearer the effectual carrying out of this provision than if the former Act of 1864 had never been amended.

Without further preface, we will briefly recapitulate the provisions of the Act with regard to periodical medical examinations. The 16th clause empowers any justice of the peace, before whom information has been laid by the police, to order any woman who is a common prostitute to be subjected to periodical medical examination; and, by the 17th clause, any woman may, by a voluntary submission in writing, subject herself to a periodical medical examination by the visiting surgeon. The 18th clause empowers the Admiralty or War Office to make regulations as to times and places of examination, and general arrangements for conducting them. The 19th clause requires the visiting surgeon, at the first examination of each woman, to prescribe the times and places at which she is to attend again for examination. The 28th clause enacts that any woman subjected to examination by the order of a magistrate absenting herself or wilfully neglecting to submit to examination, is guilty of an offence against the Act, and liable to imprisonment.

Thus it will be seen that periodical medical examination is distinctly provided for by the Act; voluntary submission is encouraged, and power given to the magistrate to enforce examination if not voluntarily submitted to.

We will next direct attention to the mode of examination as carried on at present. Instead of forming a register of all known prostitutes, and subjecting them in regular rotation to periodical medical examination, the police employed under the Act are directed to visit the naval and military hospitals, and collect information from the soldiers, sailors, and marines suffering from contagious disease, as to the women by whom they believe they have been infected. Such women are then sought for, and brought to the visiting surgeon for examination; and from this source, with the addition of a few who have voluntarily come to the hospital without being brought by the police, cases of disease have been found sufficient to fill the vacant beds. This being the case, it is not thought to be of any service to subject a larger number to examination, nor even to instruct those examined and found free from disease to attend at regular periods for examination, as prescribed by the 19th clause of the Act. Those only who are regarded as doubtful cases are re-examined at short intervals by the visiting surgeon, until he is satisfied that they are either free from disease or fit patients for the hospital. Thus it will be seen that a

large number of women are not examined at all; while *none* are subjected to the regular periodical examination laid down by the Act.

When the Contagious Diseases Act of 1866 came into force, the Royal Albert Hospital contained only sixty-two beds in its lock wards, and it was manifest that the cases of disease were out of all proportion to the accommodation provided. It was therefore argued, and rightly then, that it would be absurd to institute a general examination with such inadequate provision for the reception of patients. Instructions were therefore issued to the police to bring up cases for examination only sufficient to fill up vacancies as they occurred. These instructions still remain in force, although there are now one hundred and sixty-two beds in the lock wards instead of sixty-two; and thus is continued a system necessary for the working of the Act in its earliest infancy, but which is now out of date.

There are, no doubt, some supposed objections to the institution of periodical examinations. The first is that the number of beds is still inadequate to the amount of disease. Granted that it is so, are the Admiralty and War Office to be expected to go on increasing the size of their hospitals at each station until they will accommodate the whole number diseased at a certain date? and are we to wait till then for the establishment of periodical examinations? In that case, if the authorities have any faith that hospital treatment is going to diminish the amount of disease, they would soon be left with empty wards to testify to an unnecessary expenditure of public money. Supposing periodical examinations were at once established, and that the number of beds were found inadequate to receive all cases of disease, the visiting surgeons should have the power of selecting the cases most demanding treatment, so that syphilis might be preferred to gonorrhœa, and acute gonorrhœa to chronic discharges from the genitals. But it is contended that under the 20th clause of the Act, although the woman found to be diseased is only declared "liable to detention," yet the visiting surgeon has no alternative but to give her a certificate and send her to the hospital; and thus all cases, acute and chronic, severe and trivial, must take their turn together, without any power of selection. The way out of this difficulty appears to us to be very simple. The Admiralty have already made a regulation by which pregnant women, though found diseased, are exempted from detention in the hospital. Let them exercise the same dispensing power in the case before us, and issue a fresh regulation under the 18th clause of the Act, to the effect that, should the number of women found diseased be in excess of the vacancies, the visiting surgeon shall have the power of selecting for detention those cases which he considers most urgent.

There remains one more objection to be considered. We understand that the police are averse to the establishment of periodical medical examinations; in fact, that they regard it as almost impracticable from the difficulties they anticipate they would meet with in inducing the women to submit, and the reluctance they feel to call upon the magistrates to use the power which the Act gives them of compelling periodical attendance. The first part of this objection is sufficiently met by the fact that at Devonport 900 women have already signed a voluntary submission, not to being examined once, but periodically. Should any difficulty arise on this head, it will result, we believe, from the fact that, although 900 have signed this submission, not one has been called upon to fulfil it, and it may therefore at first be looked upon as an innovation; but let periodical medical examination be once known to be the order of the day for all without distinction, and we are persuaded this difficulty will vanish.

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Two important essays have recently been published on the Physiology of the Urine. The first of these is a thesis presented by M. BYASSON for his degree, in which he gives the result of his investigations upon the influence of mental work on the composition of the urine, and contrasts it with the changes produced in the same secretion by vigorous bodily exercise. An important line of inquiry seems here to be opened up, and it is somewhat surprising that it has not attracted more attention from the hands of chemists and physiologists. It is reasonable to suppose that so large a mass of highly albuminous material as the cerebro-spinal nervous system represents must furnish, even when at rest, as a mere result of the ordinary processes of metamorphosis consequent on its vitality, a notable proportion of urea, and, *a fortiori*, a large amount when the activity of those processes is exalted by the active discharge of its functions. But we do not remember to have seen an account of any inquiries with this specific object in view. The details of M. BYASSON's experiments are not yet accessible, nor do we know in what mode he exerted his mental faculties. But the general results at which he arrived are, that, in the first place, cerebral activity is accompanied by an augmented excretion of urea; secondly, that, under the same circumstances, the alkaline sulphates and phosphates are increased; and thirdly, that the discharged water is more abundant, which is in accordance with the well-known fact that large quantities of urine are secreted under nervous influence and by nervous people. If we compare these results with those which are found after the performance of vigorous muscular exertion, it is noticeable that in this last there is also an increase in the quantity of urine and of urea; but that, instead of an augmentation of the alkaline sulphates and phosphates, the proportion of uric acid and of chloride of sodium is increased. So satisfied is M. BYASSON of the accuracy and constancy of these observations that he remarks:—"If the urine of a man who had followed one system of diet, and who was otherwise placed as nearly as possible in the same external conditions, were examined for three days, it would be possible by analysis alone to determine whether he had been in a state of repose or engaged in vigorous mental or muscular exercise."

The second essay to which we would call attention is by WEIGELIN, of Stuttgart, who, in the course of an extensive series of investigations upon the circumstances modifying the production of urea, has particularly examined the effects of muscular exertion. WEIGELIN states that the earlier researches were directed to the determination of the production of urea during relatively long periods, as of twenty-four hours; but that it was suggested to him by VIERORDT to examine the urine in the period of rest immediately following two hours' vigorous muscular exertion. He was well prepared for such a research, as he had previously made a series of accurate analyses of his urine at each hour throughout the day. In these experiments he found it requisite to drink freely, lest the excretion of urea by the kidneys should be in any way checked

by a deficiency of water; and, on the other hand, to control the effect of the ingestion of larger quantities of water than usual, he undertook additional experiments to show the effects of such ingestion when the body was at rest. He believes he has been able to prove that a very remarkable augmentation in the excretion of urea occurs as a consequence of muscular exertion, amounting in the two hours immediately succeeding to a period of work of equal duration to as much as fifty per cent. more than the ordinary quantity. This appears to be a very important result, and, if confirmed by subsequent observers, will render a revision necessary of the statements which have of late been so confidently propounded, that muscular effort is attended with but trifling wear and tear of the proper substance of the contractile tissue. So requisite is caution for the advance of true science, and so necessary is it that all the conditions present should be carefully investigated before a well-established doctrine is thrust aside. Other and subsidiary results obtained by WEIGELIN are, that in persistent muscular contraction, such as pulling against a dead weight, or as in tetanus, there is a larger production of urea than when work is performed—that is, than when the muscles alternately elongate and contract. Finally, he observes that the rapid ingestion of water causes a more rapid increase, though only for a short time, of the amount of urea as compared with the other constituents of the urine.

# Medical Annotations.

"Ne quid nimis."

## ACUPRESSURE, TORSION, AND CARBOLIC ACID.

THOSE practitioners who, whilst bringing up their sons or pupils to the metropolis to commence their medical studies, take the opportunity of revisiting the wards and operating-theatre of their old hospital, may not improbably find methods of treatment revived which, in their day, were thought to have been exploded long since, and to have been superseded by many and manifest improvements. Foremost amongst the resurrections of the day are the methods of treatment of wounds and abscesses so forcibly insisted upon by Professor Lister, and the means of arresting hæmorrhage by acupressure or torsion, as advocated by Sir James Simpson and Mr. Syme respectively. Those who have hitherto placed their faith upon the simple "water-dressing" will smile, perhaps, at the revival of those "greasy dressings" so vigorously denounced by Liston and those of his school of thought, and will be inclined to pooh-pooh the substitution of other methods for the hitherto satisfactory ligature of hemp dexterously tied by a trained assistant. They must bear in mind, however, that all these practices have one object in common—the prevention of suppuration, and hence the diminution of the risk of operations.

The movement in this direction certainly dates from the invention of acupressure by Sir James Simpson, and though London experience has not confirmed to the full the enthusiasm of Professors Pirrie and Keith of Aberdeen, their efforts, by directing the attention of surgeons to some of the drawbacks to the use of the ligature have done much good. It is not every London hospital which possesses a surgeon of energy sufficient to travel to Aberdeen to investigate the practice of acupressure at head-quarters like Mr. Cooper Forster, of Guy's Hospital; and it is to that hospital, therefore, that those who desire to see the operation in perfection should direct their steps.

Professor Lister's views with respect to the antiseptic effects of carbolic acid, having been published in THE LANCET during the present year, cannot fail to be well known to our readers. The idea of excluding atmospheric air from a wound is by no means a new one, and various attempts have been made from time to time to effect this object, notably quite recently M. Maisonneuve's system of "atmospheric suction," or the application of an exhausted receiver over the extremities of stumps. Mr. Lister's plan has the great advantage over this of simplicity and cheapness, and when once its details have been mastered, nothing can be easier of application. We have witnessed the treatment of compound fractures by this method in several of the London hospitals, and there is at this moment in University College Hospital a convalescent case of bad compound comminuted fracture of both bones of the leg, which would most certainly have been amputated but for the favourable opinion entertained of the carbolic acid treatment. In the same hospital there have been several cases of amputation, removal of tumours, &c., which have been treated antiseptically with the best results.

Torsion of arteries for the arrest of hæmorrhage, though mentioned by Galen, was not systematically brought before the profession until thirty years ago, when Amussat, Thierry, and Velpeau simultaneously wrote upon the subject. Adopted by Dupuytren and Lisfranc, the method nevertheless fell gradually into disuse in France, and in this country it cannot be said to have ever established a hold. Its modern revival is due in great measure to Mr. Syme's influence, and papers upon the subject have been recently read by Mr. Bryant and Professor Humphry of Cambridge. Nothing new can be said upon the physiology of the subject, which was fully investigated by the French surgeons; it only remains for surgeons of the present day to discover whether, with the advantage of anæsthesia, and therefore greater deliberation in the performance of operations, it is possible so securely to twist all the vessels of a stump as to run no needless risk of secondary hæmorrhage; and here the results of London hospital practice, so far as they have gone, are eminently satisfactory.

## NATURAL SCIENCE FOR MEDICAL STUDENTS.

IN THE LANCET of August 22nd, under the above heading, we devoted an article to the consideration of a report by a Sub-committee of the Convocation of the University of London upon the Preliminary Scientific Examination for the degree of M.B. of that University. We return to the subject to point out the effect of its recommendations, if carried out, upon the young men who each year enter as medical students at our several hospitals. The first recommendation, "that the Preliminary Scientific Examination should be passed before the undergraduate enters upon his first winter session at a medical school," implies either an amount of tuition in the Natural Sciences at our ordinary schools and colleges which is not at present to be met with, or some special training for the examination in a medical school prior to the first winter of the student's career. It is this last which is evidently aimed at, for the committee goes on to show that a first summer's course at a medical school is the best preparation for the Preliminary Scientific Examination, which, it is also recommended, should not be held till August, so as to leave the entire summer session at the student's disposal. This would necessitate a revolution in the present habits and customs of medical students, who are accustomed to look upon the 1st of October as their professional birthday, and who long to plunge at once *in medias res* as regards hospital practice.

Were this scheme generally adopted there would certainly be some great advantages over the present system for those (and we hope their number is annually increasing) who propose to take the degree of the University of London. Unfortunately it too often happens that young men enter at a medical school without having been informed of the requirements of the University, and thus find themselves thrown back, as it were, at

the very commencement of their studies, having either to give up all idea of University honours, or devote time which should be spent in purely medical studies in first working up classics and mathematics for the Matriculation, and afterwards natural and mechanical philosophy, &c., for the Preliminary Scientific Examination. If these lines should come before a youth of seventeen who is proposing to enter at a medical school in the course of the present week, and who has as yet no knowledge of the University of London, we would strongly advise him to pause, and inquire whether it would not be for his future advantage to postpone his strictly medical studies for a few months, and devote his energies to passing the Matriculation Examination in January, with the view of entering in the summer for lectures on botany, &c.

In conclusion, we venture to call the attention of the authorities of the University to the fact, that supposing the recommendations of the Sub-committee to be carried into effect, the candidates at the Preliminary Scientific Examination will be, for the most part, youths of seventeen, whose ambition it is to become *practitioners of medicine*, and not mathematicians or philosophers. To continue, therefore, to ask questions such as may be suited for candidates for the B.Sc. will be manifestly unfair, and the separation of the two examinations is, therefore, essential. We observe that the Sub-committee does not scruple to animadvert upon the "stiffness" of last year's papers, and we cordially re-echo the sentiment expressed in the following sentence:—"It may be also remarked that the examiners in mechanical and natural philosophy seem not to have been sufficiently alive to the great difficulty which the majority of young students experience in making practical applications of their knowledge, especially while they are writing answers to examination-papers, and are limited as to time."

## THE EDINBURGH AND ST. ANDREWS UNIVERSITIES CONSTITUENCY.

As this constituency is now wellnigh formed, and all present possibility of adding to its strength will cease four days hence, we take an early opportunity of laying before our readers some statistical information in connexion therewith. It seems probable from the appearance of the registers that this constituency will consist of about 4500 electors, 3500 of which number will belong to Edinburgh, and 1000 to St. Andrews University. An analysis of these figures shows that, up to the present time, the medical constituency already enrolled consists of about 1600 electors; of which 1100 are on the Edinburgh and 500 on the St. Andrews registry. It is a noteworthy fact that, of 1110 graduates of St. Andrews resident in the United Kingdom, 500 only have as yet claimed electoral privileges; whereas, of 1600 medical members of the Edinburgh University, 1100 are already enrolled. And here we may pause to consider briefly the relative positions of the four candidates, because some curious facts may be gleaned out of the above figures. From statistics published as advertisements in THE LANCET six weeks ago, we find that Mr. Swinton had, at that time, a list of 300 supporters, and that Dr. Playfair had on his committee a total of 700 medical men. We may assume that, in the interval, each of the above candidates has increased his list of medical supporters by 100; and thus we find that 1200 medical votes are divided between these two gentlemen, leaving a residue of 400 votes either unpledged or promised to Dr. Richardson or Dr. Prosser James. These statistics are all-sufficient to show how utterly hopeless is the position of the medical candidates; and it must be remembered that they have not only failed to obtain the support of members of their own profession, but that a non-medical constituency exists of nearly 3000 persons, very few of whom are at all likely to vote for a medical candidate.

We have read with infinite amusement certain mythical effusions that have recently appeared in Scotch journals, to the effect that Dr. Richardson intends to retire, and to hand over his pledges to Mr. Swinton, in order to strengthen the hands of the latter candidate against Professor Playfair. There are two reasons which make patent the superlative absurdity of such a statement. University electors are a body of independent and educated men, and cannot be turned over from one candidate to another in this eminently commercial manner. The report above quoted is an insult to the good sense of Dr. Richardson, who, inasmuch as he came forward on purely scientific grounds, would, on retiring, naturally afford aid to the scientific rather than the legal candidate.

In urging for the last time the importance of registration, we would call the attention of our readers to a letter addressed to Dr. Rogers by Professor Playfair on the subject of Poor-law Medical Reform. The letter, which appears in another column, shows unmistakably that the writer is willing and anxious to aid the cause of the Poor-law medical officers; and this indication should of itself induce those who are not yet enrolled to register immediately, and so help to secure the return of a representative likely to do good work in the cause of sanitary science.

## "MEDICAL CHEMISTS."

A NOVEL and grave view of the evils arising from that tendency to dabble in physic which is too commonly practised among chemists and druggists, is suggested by Dr. Edmund J. Syson, the medical officer for Salford, in a recent report on the health of that locality. The mortality returns there have lately shown much frequency of deaths from diarrhœa, this disease not being present in an epidemic or endemic form among the population. On a careful examination of the returns Dr. Syson finds that the deaths from the malady were limited to children of five years of age and under, the majority of the victims being under one year of age. A further examination showed that the greater number of those deaths were certified for by *druggists*, on forms supplied to the druggists by the local registrars. It would seem also that the designation "medical chemist" is not an uncommon addition to the signature of the certifying druggist. Dr. Syson, reflecting upon the fact that diarrhœa is often not a disease itself, but a symptom of other diseases, and that it is especially a complication of typhoid fever; also that of necessity the so-called "medical chemist" must treat the symptom itself, ignorant of its cause, suggests that to this counter-practice of druggists much of the mortality among young children may be assigned.

## THE BIRMINGHAM GENERAL DISPENSARY.

OUR readers must often have wondered how the contest of the medical officers of the Birmingham General Dispensary terminated. These gentlemen were the efficient officers of a very wealthy institution, and thought themselves entitled, in consideration of its wealth, and the nature of their services, to receive honoraria. The Committee of the Dispensary could not see this, and the general body of governors approved the determination of the committee not to grant honoraria to the members of the medical staff. Upon this the staff in a body resigned, and, so far as we can learn the facts—and our information is reliable,—resolved among themselves that no member of the staff should accept any overture from the committee without previous conference with his colleagues. Apart from a specific understanding to this effect, there can be but one opinion as to the moral obligation of any member to communicate with the body with which he had acted in vindication of a principle, before accepting an office which arose out of the action of that body, if not out of a determination to set the body at defiance. This is most obvious. The committee remodelled the whole medical officership. They resolved, rather than give their honorary and long-tried officers an honorarium, to give good salaries to additional resident medical officers, and to work the institution with such officers, with the help of an occasional consultation. For this consultation they de-

termined to pay as in private practice. And they offered the post of consulting physician to their senior physician, Dr. Anthony. Dr. Anthony accepted the office, and suggested that instead of paying him in separate fees, they should give him a hundred guineas a year. He did this without any conference with his late colleagues. We exceedingly regret that Dr. Anthony acted thus. His colleagues would probably not have objected to his acceptance of the proposal made to him, though they had good right to feel aggrieved by the determination of the committee to do anything rather than treat generously their honorary officers. But Dr. Anthony would have only acted with due respect to his late colleagues and to himself in conferring with them. The committee behaved with still less respect to the surgical portion of the staff than to the medical, for in choosing a consulting surgeon they passed over the three late surgeons of the institution, two of whom had served the dispensary for fifteen years. The least the committee could have done was to pay its honorary staff the compliment of offering the senior surgeon the duty corresponding to that which had been offered to the senior physician. And if the senior physician had made the whole matter one of consultation with his late colleagues, this point would doubtless have been pressed upon him, and reasonably so. How discreditable it is that we cannot act together. The ex-honorary staff of the Birmingham Dispensary may well feel discouraged that after so long a period of honorary service it has been so lightly esteemed. But its greater regret must be that a colleague in the contest should have acted separately from them.

## SHOEING HORSES.

WE have recently read Captain Cockerell's Report, issued by the War Office, on a new system of shoeing horses introduced by Monsieur Charlier, of Paris. As doctors are usually very fond of horses, and may be supposed to have their own opinions, we venture to give ours. No doubt many objections to the old system can be urged. The process adopted by farriers of cutting away the strong and constantly renewed horn on the sole of the foot appears to be physiologically incorrect. The shoes are almost always too heavy, are often badly placed, and contain too many nails. It has often occurred to us that some plan should be devised for fixing the shoe in such a way that it could be readily removed or replaced. Farriers will no doubt ridicule the idea of taking off a horse's shoes, like those of a man, when he goes to bed; but however novel the idea may be, it is, we are convinced, anything but ridiculous in principle. Let it be granted that nature has constructed the feet of the horse on a plan very different from those of his rider; but no one, unless he were intoxicated or mad, would voluntarily think of sleeping in his boots. A dead weight of iron, through which the foot sustains a series of incessantly repeated concussions during the day, can have no other effect than that of causing an unnecessary expenditure of force with a commensurate amount of fatigue; and the comfort of the animal, as well as the requisite growth and development of the foot, which have to take place during periods of rest, cannot be properly accomplished when heavy iron shoes are constantly maintained upon it.

We nevertheless do not see any plan of doing away with nails to fix the shoe to the foot; but if they must be employed, they need not be misused as they generally are. Horse-shoeing may be best compared with man-shoeing. Man and beast both suffer; but the former has made an advance lately, in consequence of his being able to express his feelings pretty loudly to his shoemaker, and insist on being properly and comfortably fitted.

We have considered M. Charlier's theory from the time it was first promulgated, and we confess we are not convinced that its great superiority is such as to demand its adoption. If the ordinary horse-shoe be studied in connexion with the foot of the animal it is intended to fit, the shoe will commonly be found to be wrong in the following particulars:—It is made too narrow at the fore part, and too wide at the back. It is fixed with eight nails, extending all round, and confining the heel; while the tender parts of the foot are left exposed and fitted to catch every sharp stone. The shoe ought to be rounder than that made by farriers, and secured by five, or at most six, nails round the toe. Good fitting does more to hold the shoe on than the nails; but this gives the smith more trouble, and he finds it easier and cheaper to drive in a lot of nails all round, and does so. M. Charlier is right, we think, in deprecating the cutting away the frog, and this need not be done with ordinary shoes more than with his; but cutting and trimming makes the foot look neat, and therefore grooms and smiths like it. It is very probable that the best, easiest, and safest form of shoe would be something between the Turkish round plate with a hole in its centre and ours, because what the horse misses in the ordinary shoe is a support for the heel, on which the weight of his body rests, and the elasticity of his action depends. This class of shoe, called a bar-shoe, clumsily made however, is frequently used with horses when they have weak heels or corns, and it is found that they can work well in such a shoe when they cannot in one of the common form. There is, however, a strong feeling against it, because it is customary to suppose that a horse is unsound which wears shoes of this description.

## THE MAURITIUS.

APROPOS of our remarks last week in reference to the effect of clearing away forest trees on the rainfall in the Mauritius, we may call attention to a paragraph which appeared in *The Times*. In Western Nebraska and Kansas the quantity of rain is reported to have doubled since the early settlement in those regions, owing to the planting of trees and the opening up of the soil so as to absorb moisture. Colorado and California, States generally utterly dry for eight summer months, have this year begun to have heavy rains from similar causes. On the other hand, Ohio and northern New York are echoing the complaints of the French Agricultural Report, that the felling of forests is the ruin of rivers.

We might add Mauritius to the list of places where man has acted in total disregard of these natural laws, with the result that during 1865, the year preceding the attack of fever, the rainfall was exceptionally small, and has since continued to be relatively less than during former years.

## THE WOUNDS PRODUCED BY THE CHASSEPOT BULLET.

PARAGRAPHS have from time to time been making their appearance in the public journals as to the effects of the Chassepot bullet and the enormously disproportionate size of the exit as compared with that of the entrance wound. Our readers will no doubt remember that these statements were based upon experiments made with this weapon at the camp at Lyons on the bodies of dead horses. We have been favoured by Dr. Gason, of Rome, with information as to the effects produced by this bullet at Mentana in November last, which cannot fail to prove highly interesting at the present time; and Dr. Gason's observations are the more valuable on account of their being based on the personal experience of a skilled professional observer.

It would appear from the reports from the camp at Lyons that the bodies of dead animals were used for the experiments, and it was even alleged by some that those of dead men had been similarly employed; if so, it is a practice which we are told is not altogether unknown in French history. Be this as it may, the wounds on the dead bodies of men or animals are not, for several physiological reasons, identical with those inflicted on living subjects; and the difference in their appearance was remarked by Dr. Gason after the battle of Mentana.

The projectiles used by both combatants in that engagement were principally the round ball, two sizes of the Minié, and the Chassepot ball. The lightness of the Chassepot firelock and its loading at the breech caused a far greater proportion of wounds in the upper part of the body than was the case in those wounded by balls from the muzzle loaders. The entrance made by the Chassepot ball was very small; the exit not much larger. We have the authority of Dr. Gason for positively asserting that among the cases brought into the hospitals in Rome there was not one where the wound produced by the Chassepot bullet bore any proportion to that mentioned in the report from the camp at Lyons—that "the exit was as large as a person's two fists." There was much less effusion of blood beneath the skin than in wounds by the round ball or Minié. The long bones were more frequently split. The immediate effects of the Chassepot were more fatal; but the ulterior effects less severe and fatal in wounds produced by the Chassepot than in those of the round ball or Minié. To no other cause, says Dr. Gason, can he attribute the greater fatality and more numerous amputations that occurred in the Military Hospital at Rome among the Papal troops than among the Garibaldians. The former were naturally supplied with the better accommodation, and had as good medical attendance as it was possible; whereas the Garibaldians were lodged in a much inferior building, and were overcrowded, and the attendance was supplied by surgeons not accustomed to gunshot wounds. This was occasioned by the exceptional state of affairs, and the authorities not being prepared for so severe an engagement. The expense was borne by the Civil Hospital of Santo Spirito, with the exception of a comparatively small hospital, where the expenses were met by private subscriptions. Both parties might have been lodged in a more healthy situation than in Rome—close to the field of battle. The external hæmorrhage was greater in wounds produced by the Chassepot ball than by any other form of projectile; and in those places where the Italians fell when struck by it there were large pools of blood. The Chassepot bullet is one inch long, blunt pointed; its base, the broadest part in circumference, is half an inch in its diameter. Its weight is six drachms and a half.

## THE TREATMENT OF CIVILIANS IN MILITARY HOSPITALS.

THE publicity given by the press to some recent occurrences has not been without effect. We have learned with much pleasure that the War Office authorities have given a little more latitude to the governors of military hospitals as to the admission of persons suffering from accidents and other urgent cases. If an individual has the misfortune to fall down and break his leg, or get shot, near a military hospital, his life need no longer be placed in jeopardy by his being conveyed to a civil hospital at a distance; but he may, under these exceptional circumstances, be admitted into the military institution. The expense which the Government may incur in the matter will be insignificant, and its servants will no longer be compelled to disregard the laws of humanity.

## SOCIAL SCIENCE ASSOCIATION.

AT the forthcoming Social Science Congress at Birmingham the proceedings of the Health Section promise to be of much interest, not only on account of the special questions to be discussed, but also from the character of the other communications. The section will open on Thursday (Oct. 1st), and that day, Friday, and the following Monday will be reserved for the special questions. The discussion on "Hospital Administration" will be opened by Mr. Matthews; and Dr. Percy Leslie, Dr. Horace Dobell, and Miss Garrett, L.S.A., will also read papers. "The Functions of Medical Officers of Health" will be treated by Dr. Liddle (Whitechapel), and Mr. Hayward (Oldbury); and the third question, "On the Relation of the Water-Supply to the Health of Large Towns," will be discussed by Dr. Alfred Hill; and Dr. Stevenson Macadam (Edinburgh), Professor Mapother (Dublin), and Professor Gairdner (Glasgow), are also expected to speak on this question. Among the papers to be read on the Saturday and Tuesday of the meeting we notice the following:—Dr. Monckton, "On Cottage Hospitals;" Mr. Furneaux Jordan, "On the Extension of the Contagious Diseases Prevention Act;" Mr. George Hurst, "On the Sanitary Condition of Country Villages;" Mr. Plant, "On the Mortality of Birmingham;" Mr. Brooke Smith, "On the Sewage Question;" and Dr. Pringle "On Stamping-out Small-pox." The President's address in the Health Section will be delivered on Monday morning, Oct. 5th. In the Economy and Trade Department we notice that Dr. Stallard will take up the important question of "Out-door Relief;" and the "Employment of Girls in Factories" will be treated by Dr. Jordan, Mrs. Oldham, and Miss Merryweather.

## SOLDIERS' WIVES.

WE think the step taken by Dr. Sinclair, of Dublin, a very judicious and useful one. He has been making arrangements for the practical instruction in midwifery of thirteen of the soldiers' wives belonging to the garrison of Dublin at Sir Patrick Dun's Hospital. The provision made by the authorities for the succour and treatment of soldiers' wives is comparatively small, and the establishment of a system of regimental midwives is a measure which we strongly advocated on a recent occasion. Every regiment ought to have attached to it at least one well-instructed midwife. Dr. Sinclair deserves much credit for having taken the subject in hand.

## THE INDIAN MEDICAL SERVICE.

WE are glad to find that our anticipations as to rewards to be conferred upon members of the Indian medical service for the Abyssinian campaign have, to some extent, been fulfilled by the announcement in last Tuesday's *Gazette*, that Surgeon John Lumsdaine, of the Bombay army, has been promoted to the rank of surgeon-major. It is to be feared, however, that this is the only announcement of the kind forthcoming; and we cannot compliment the Indian authorities upon their good taste in coupling with the representative of Indian surgery the name of the *veterinary* surgeon (no doubt a most worthy and deserving officer), who has also received his promotion, as will be seen in the following official advertisement:—

"Her Majesty has been graciously pleased to command that Surgeon John Lumsdaine, Bombay army, and 1st-class Veterinary-Surgeon William Lamb, Bombay army, be promoted to the ranks of surgeon-major and staff veterinary-surgeon respectively, from Aug. 15th, 1868, in consideration of their valuable services with the Abyssinian expeditionary force."

## TYPHUS OF THE PERCH.

UNDER the designation "typhus," Drs. F. A. Forel and G. du Plessis, of Geneva, describe a very deadly epizootic, which prevailed among perch in the Lake of Geneva in 1867, and which recurred among the same class of fishes inhabiting one of the tributary streams of the lake in the course of the present year. The term "typhus" would seem to have been applied to the malady by those gentlemen because they found in the blood of the sick and dead fishes microzoid parasites, vibrions and bacteria, similar, they believe, to the microzoid bodies found in the blood of human typhus patients. The epizootic broke out among the perches in the Lake of Geneva in May, 1867, and continued throughout that and the subsequent year; and the dead were to be numbered by hundreds of thousands. The disease was as fatal in May, 1868, among the young perches in a stream (Rue des Ouates) which flows into the lake about a league below Orbe. The authors describe the epizootic as

having a stage of invasion, persistence, and decline or agony. But this systematic arrangement is rather a matter of inference than observation. When the disease is developed, the fish is stupid and indifferent, lying at rest among the vegetation in the shallows, and it may be seized with the hands. The authors describe this state as one of "adynamia and coma," and remark that no convulsive moments were observed. In many cases "a yellowish, bilious diarrhœa" was noticed; in others, sanguine injection, often strongly marked, of the nostrils, lips, and base of the fins; occasionally even slight hæmorrhage at the points of extreme injection. Whitish spots, also, were frequently seen scattered over the surface of the body, irregular in form, and caused by a raising of the epidermis. Gangrenous spots also occurred at the base of the fins, and the tail was covered by a white fungus. The unaffected portions of the surface retained, nevertheless, the normal brilliancy of colouring. Post-mortem examination showed congestion of the brain, the intestinal canal below the choledic duct distended with a yellowish liquid which swarmed with bacteria and vibrions, and in some instances, in which the muscles of the abdomen were stained of a yellow colour, bacteria were found abundantly between the primitive fibres. For the rest, the chief changes were discovered in the blood. These consisted in a general alteration, dissolution, and an absence of clot; changes in form of the globules in different degrees, and the presence in the serum of bacteria and vibrions.

## PROFESSORS VIRCHOW AND ROBIN.

THESE two great rivals in histology had until now contented themselves with calmly and scientifically propagating their doctrines in their respective countries. But the German professor, stung to the quick by an irritating attack by M. Robin in a lecture delivered at the Faculty of Paris, has now openly declared war against the French histologist, and boldly carried the scene of action into his adversary's own camp. In a series of articles published in the *Gazette Hebdomadaire*, under the telling title of "Plaidoyer pro domo sua," M. Virchow defends his opinions with considerable warmth, and calls upon M. Robin to do battle. Doubtless M. Robin will not be slow in accepting the challenge, and it will be interesting to watch the contest between the two celebrated representatives of the French and German schools of histology.

## REDUCTION OF VACCINATORS IN ISLINGTON.

THE number of public vaccinators in Islington has been reduced from eight to four, in order, it is said, to secure more efficient results. The committee appointed to effect this reduction has recommended the dismissal of two vaccinators who have seen twenty years each of Poor-law service, have respectively vaccinated upwards of 10,000 cases, who have therefore had great experience in vaccination, and have lately given important assistance in introducing, in co-operation with Dr. Ballard, a fresh supply of lymph from the cow. We think that if the number of public vaccinators must be reduced, great consideration should be given to the claims of the older officers. The salaries of these officers we know to be so inadequate that their only chance of making anything out of their appointments is through the extras, of which vaccination is the most advantageous. To deprive them, therefore, suddenly, of this duty seems to us a great hardship, and is a course to which we hope the Poor-law Board will not consent.

## MEDICAL ACCOUNTS AND THE STIRLING POLICE COMMISSION.

A VERY unseemly and disrespectful conversation transpired in the Stirling Police Commission lately, on the charges of Drs. Beath and Moodie, for analysing the water of the public wells of Stirling. These gentlemen charged respectively eight guineas—not a very exorbitant sum for an analysis which bore upon the health of 10,000 people. We are no advocates, generally speaking, for medical men in the thick of practice undertaking chemical analyses; but if they do undertake them, they must be paid worthily. Dean of Guild Low characterised the charge as "a job." Mr. Turnbull suggested "that in future the Commissioners in employing medical men should take in estimates of the work to be done." He saw no reason why they "should be treated otherwise than as tradesmen." These speeches entirely explain the value of Dean of Guild Low's and Mr. Turnbull's expressions on this subject. They are evidently men who value skill and science as they would value chairs or chops. We would recommend Mr. Turnbull the next time he is personally in need of medical services to try the "estimates" principle, and see how it answers. When he has done this, and taken the lowest tender, he may have some wiser and more respectful appreciation of the value of skilled opinion.

## ANIMAL VACCINATION IN BELGIUM.

THIS kind of vaccination, known as the Neapolitan, and introduced into France by M. Lanoix, has just received the sanction of the Belgian Government. By a royal decree, an animal vaccine establishment is to be founded, the appointed director being M. Warlomont, who cordially took up the method after M. Lanoix's labours at Paris. In that capital animal vaccination found some opponents, and has not made such rapid progress as was at first anticipated, in spite of the very efficient support of Dr. Depaul, the head of the Vaccination Office of the Academy of Medicine of Paris. The matter hinges upon two questions,—Is animal vaccination as effectual as the same operation performed with lymph conveyed from one human being to another? Is it true or is it not true, that syphilis may be inoculated with the lymph used in the last-mentioned manner? Independently of any other consideration, it would be a great boon, especially in case of an epidemic of small-pox, to have an abundance of healthy lymph ready at hand. Nay, in localities where numerous revaccinations were required, heifers might be largely inoculated, and an unlimited supply of lymph be at the command of professional men. Nor is it necessary, where animal vaccination is practised, to give up other modes of vaccinating: the population is large enough to support both methods. The question rests mainly with the medical advisers of the Privy Council.

## THE DRAINAGE OF BRIGHTON.

A CORRESPONDENT has written us his opinion that in the Report on the Drainage of Brighton our Commissioner has not sufficiently dwelt upon the nuisance on the shingle near the Pier entrance. He states that "the disgusting smell on these hot days, with southerly winds, is universally complained of. People who go down in ignorance to this point to view the sea and enjoy its 'fresh breezes,' often return with diarrhœa and sickness." Such a nuisance as is here described should not be allowed to exist in the aristocratic and wealthy town of Brighton.

THE ensuing winter session of the Metropolitan Schools of Medicine will be inaugurated, on the 1st prox., by an unusual number of prandial ceremonies. The annual dinner of old Bartholomew men will take place at Willis's Rooms, under the presidency of Dr. F. J. Farre. The Middlesex men will feast at St. James's Hall. The staff and old students of St. Mary's will eat their first annual dinner at the Freemasons' Tavern; and the Grosvenor Hotel will be patronised by those of St. George's who choose to celebrate in this way the opening of the new buildings attached to that school. The staff of the Liverpool School will also dine together on the same day at the Adelphi Hotel.

THE medical officer of the Bodmin Union, Mr. Mudge, having applied for an increase of his salary, the Poor-law Board recommended that it should be conceded. The guardians have, however, refused to grant it. Mr. Mudge has therefore resigned his office, and the guardians have hitherto, we are glad to find, been unsuccessful in securing a successor to the vacant post. A right feeling and action on the part of the members of the profession should enable Mr. Mudge to obtain the fair remuneration to which his services entitle him, and "to improve the occasion" by showing that the profession is becoming thoroughly united in the matter of a Poor-law reform, and determined to enforce its just claims.

SOME changes have been effected in the clinical department of the Faculty of Paris, through the death of Jarjavay. Prof. Richet has abandoned the clinical chair at La Pitié for that of La Clinique, and M. Broca, Professor of Surgical Pathology, takes M. Richet's succession at La Pitié. The chair of Surgical Pathology thus becomes vacant at the Faculty.

*The Times* states that the War Department stores at present lodged in the Tower of London are about to be removed to her Majesty's dockyard at Deptford. This arrangement cannot fail to afford the opportunity of effecting extensive improvements in the barracks, and of removing several of the evils complained of in our Report.

DR. GIBSON, medical officer of the St. Pancras Workhouse Infirmary, has addressed a letter to the guardians, which conveys a serious charge against private practitioners, who, it is alleged, are in the habit of sending people to the insane wards of the workhouse who are in good circumstances, and who ought therefore to be sent to an asylum. As no definite instances are mentioned, it is of course impossible to determine how far the charge is capable of being met. The principle, however, advocated by Dr. Gibson is a right one: none but paupers have any business in workhouses.

IN THE LANCET of Aug. 8th, we called attention to the filthy state of the river Witham, at Lincoln, and to the unhealthiness of the city itself. We are sorry to observe in the *Lincolnshire Chronicle* statements showing that no improvement has taken place in either of those respects. It is said that people are afraid to visit the city owing to the great amount of sickness that has prevailed during the whole of the summer, and that the river emits a stench almost unbearable.

*Le Courrier Médical* announces that, in consequence of the numerous victims of homœopathic treatment, the Emperor of Russia has issued an ukase which prohibits the practice of homœopathy in any part of the Russian Empire, under pain of a fine of 500 roubles and two years' transportation to Siberia.

HIS Grace the Duke of Marlborough has handed to the Radcliffe Infirmary, Oxford, a donation of 100 guineas, being the proceeds of fees received from visitors to Blenheim Palace and gardens.

A PENALTY of 20*s.* and costs has been inflicted on a person living at Peckham for neglecting to have his child vaccinated within three months after birth.—At Swindon (Wilts), the guardians have prosecuted a father for having failed to bring his child for inspection by the vaccinator a week after the operation had been performed.

THE Prince and Princess of Wales are expected in Glasgow on the 8th of October, the Prince proposing to laying the foundation stone of the new College buildings now in course of erection.

MR. SLOMAN, M.R.C.S., of Farnham, has directed the attention of the Local Board to the defective drainage of the town, and the consequent prevalence of disease. Having ascertained that the opinion of Mr. Bateman was adverse to the applicability of the water-system to Farnham, Mr. Sloman suggested that the dry-earth system should be tried by each member of the board on his own premises, so as to pave the way for its general adoption.

WE learn that Dr. Slight, of Brewer-street, Regent-street, and Dr. Rogers, of Dean-street, were unanimously appointed public vaccinators, the former to the western, the latter to the eastern, division of the new Westminster Union, St. James's.

WE regret to announce the death of Professor Monneret, at the age of fifty-eight, and hope to give some particulars of his life in a future number.

## THE CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual publication of the Calendar of the College of Surgeons having just taken place, we lay before our readers an abstract of the facts of interest the volume presents. The lists of Councillors, &c., have of course been amended in accordance with the elections of the past year, but Mr. South's resignation having taken place since the annual meeting of the Council on July 9th, that gentleman's name still appears among the existing Court of Examiners. For the first time, the Hunterian Professorship of Surgery and Pathology is separated from the Arris and Gale Lectureship, Mr. Le Gros Clark being the occupant of the first chair, and Mr. Hulke of the second; Mr. Huxley remains Hunterian Professor of Comparative Anatomy and Physiology.

In the bye-laws relating to *ad eundem* admissions to the fellowship and membership of Fellows or Members of the Scotch and Irish Colleges, it is now enacted that they shall not be admissible "unless the Council of this College shall be satisfied that the respective courses of professional study for such Fellowship, Membership, or Licence, required by the said colleges or faculty to which such Fellow, Member, or Licentiate shall belong, shall be equal to the respective courses of professional study required for the Fellowship and Membership of this College." This law will prevent Fellows by election elsewhere claiming to be admitted to the rights of Fellows by examination, and is a very salutary regulation.

During the last collegiate year there have been 25 new Fellows by examination, and 13 by election. Three hundred and forty candidates for the membership passed, out of 398 who presented themselves, one gentleman having been indulged in the luxury of a "special court" in August, 1867. The Midwifery Board sat four times, passing 32 candidates, referring 6 to a written examination, and plucking 7. The Dental Board met but once, and then examined and passed 4 candidates.

During the past year the deaths of 25 Fellows are recorded, the oldest in seniority of membership having been Mr. Titus Berry (1804), and the youngest Mr. George Ferguson (1857). The College authorities report the deaths of 128 members in the same period, but the compilers of the list do not even take the trouble to read the obituaries in THE LANCET, or they would have learnt that the names of Surgeon-Major Hugh Crawford Walshe and Mr. John Witherington, of Blackburn, should have been removed from the list of living members, and added here; they might also have discovered that the late Mr. Frederick Powell belonged to the 2nd Batt. 1st Royals, and not to the troop-ship *Euphrates*, on which he died.

Having in our impression of July 4th given an analysis of the Curator's report of the Hunterian Museum, we need not refer to the subject again here.

The College accounts, from Midsummer, 1867, to Midsummer, 1868, show the gross receipts to have been £11,744, against £12,409 last year; and the disbursements £11,557,

against £11,511 in the former period. The difference in the receipts is, however, more apparent than real, since last year's accounts included a sale of stock to the amount of £868. The fees received for the preliminary examinations have increased by two hundred and fifty pounds, but those for the diploma of membership have fallen off a hundred pounds, which is just balanced by an increase of the Fellowship fees. The Fellowship by election yielded £136, whilst the fees for both the Midwifery and Dental diplomas have decreased.

The payments to the Council amount to £269—a slight increase on last year—and to the Court of Examiners £3159, against £3306 last year. The "College Department" is the only department with an increased expenditure, viz., £2598 against £2403 last year, the gross sum being divisible into expenses of the College £1283, and salaries and wages £1314. Both items, and particularly the former, are capable of reduction, and as a first step in that direction we would suggest a more detailed account of expenditure under the separate heads of coals, postage, &c. It is only fair to mention that the household accounts on this occasion include a bust of Sir William Lawrence, for which no price is given! The Museum department is debited with £436 for expenses, and £1381 for salaries, and the Library with £317 for books, and £300 for salary.

The Calendar itself as a book requires a few words, since its form is slightly altered, and its price reduced from half-a-crown to one shilling. As last year the Calendar cost eighty-five pounds, and yielded only six, it was time some experiment should be tried by which it might be rendered more remunerative. It is for the future to be obtainable within the sacred precincts of the College.

# Correspondence.

"Audi alteram partem."

## PARACENTESIS CRURIS.

*To the Editor of* THE LANCET.

SIR,—In 1861 you inserted in your periodical a description of a method of relieving anasarca by deep puncture, which I ventured to submit to your notice as both novel and successful. A case of the kind has recently been attended with a result so unexpected and remarkable that it appears to me very desirable that it should be made known to the profession.

For reasons which need not be given, the report must be brief and confined to the fact about to be described, the more so as in other respects there was nothing unusual to be mentioned.

The patient, a lady aged about forty-five, was suffering from general anasarca, caused by disease of the heart. The legs were enormously swollen, and to such an extent that a large red patch appeared on each, plainly preparatory to their bursting. Any other than a raised position in bed had long been impossible, and nothing need be said as to shortness of breathing, &c.; the enlargement extended up to the loins and over the abdomen, and, in short, all the attendant circumstances were such as are usually present in these cases.

The operation was at once determined upon; but as the patient (simple as it is) felt the greatest alarm on its being proposed, my worthy coadjutor suggested that it should be done at first in one leg only; and as it seemed clear enough that when the water was let off from the right leg, and from all parts as far as the groin of the left, the unwieldy and irksome state of this latter limb would manifestly remove any reluctance to its being repeated, the puncture was accordingly made in the right foot.

On our visit the following day, besides the reduced size of the right leg, and the improvement in the breathing, we were pleasingly told that "the other thigh was a good deal softer." This we then attributed to fancy; but, to our surprise, at our next visit the enlargement in both legs had actually diminished in nearly the same degree. The relief, in truth, was in a few days almost as complete as if both legs had been operated upon, and at the same time. The patient was able to lie down, and to move from room to room with ease, and even to go up and down stairs.

The only surprising point in this case is the fact of the water having ascended one leg, and made its way out at the other foot. By the ordinary law of gravitation this could not take place. Could it have been effected on the principle of the syphon? At all events, it seems that this accidental teaching suggests an improvement, and no unimportant one, of operating on one leg only.

I am, Sir, your obedient servant,

Spring-gardens, Aug. 1868. CHARLES WITT.

## THE NEW VACCINATION ACT.

*To the Editor of* THE LANCET.

SIR,—For the information of those of your readers who are medical officers to union workhouses, and whose contracts (which include vaccination) bear date previous to January 1st, 1868, I forward the answer I have received to my application to the Poor-law Board, inquiring if, under the new Act, I am entitled to the payment of 1*s.* 6*d.* per case for successful vaccination in the union workhouse.

I am, Sir, your obedient servant,

Hitchin, Sept. 21st, 1868. OSWALD FOSTER.

ANSWER.

Poor-law Board, Whitehall, Sept. 11th, 1868.

SIR,—I am directed by the Poor-law Board to acknowledge the receipt of your letter of the 30th ult., and, as regards your inquiry, to state that unless the guardians of the Hitchin union enter into a new contract for your services of medical officer of the workhouse, which shall contain special provision for payment in respect of the performance of vaccination in workhouses at the rate of remuneration prescribed by Section 6 of the Vaccination Act of 1867, you will *not* be entitled to any fee in respect of cases of successful vaccination performed by you in the workhouse.

I am, Sir, your obedient servant,

FRANCIS FLETCHER, Assist. Sec.

To Oswald Foster, Medical Officer of the Workhouse of the Hitchin Union.

## THE CURABILITY OF CONSUMPTION.

*To the Editor of* THE LANCET.

SIR,—In the admirable Address in Medicine recently delivered at Oxford by Dr. Gull, the following passage occurs:—"The word phthisis, which has now too often a specific value, will dilate so as to include a whole genus of chronic affections, which, when duly recognised and classified, will afford more secure grounds of prognosis, and spare us the perusal of worthless records of so-called consumption cured." This statement suggests the question, Is consumption curable? And I take it (from the above) that Dr. Gull's reply would be in the negative.

Now there is no doubt that many chronic pulmonary affections have been mistaken for and described as consumption. Chronic bronchitis has often been thus mistaken, and recovery having resulted, those who disbelieve that consumption is recovered from, show up the mistake in support of their opinion. An enlarged bronchus may be mistaken for a cavity; but if lung-tissue is recognised in the sputa by the microscope, and as the case proceeds the signs of a cavity be lost (although previously present), and, by treatment, health restored to a patient several of whose relatives died of phthisis, there is an inclination to give the matter more careful consideration. But further, the patient whose case is thus briefly given dies many years after of some independent affection, as typhus, for instance, and post-mortem examination shows cicatrices in his lung at the parts where, during life, cavities had been determined to exist. There are no dilated bronchi. What, then, is liable to give rise to cavities in the lung, in a patient presenting a scrofulous tendency?

Dr. Hughes Bennett, in his excellent monograph on Consumption, gives many cases such as I have mentioned, in which he had the opportunity of examining the lungs after death, and several in which, not a single cavity, but several tuberculous cavities, had formed. Of course there are later stages of all diseases from which recovery is impossible, and this is true of phthisis perhaps pre-eminently. Yet in the face of evidence such as this, the perusal of records of consumption cured does not appear to me to be "worthless."

I trust some of your numerous correspondents will define phthisis for me. I have always regarded the word to signify the pulmonary complication of the constitutional tendency or

diathesis to which the term tuberculosis is applied; and the "whole genus of chronic affections" may be so many troublesome additions to, and consequences of, this pulmonary complication.

Requesting that you will give insertion to this in some early impression,

I am, Sir, your obedient servant,

Worksop, Sept. 10, 1868. FRANCIS A. DAVY, M.D.

## TREATMENT OF HÆMORRHOIDAL AFFECTIONS.

*To the Editor of* THE LANCET.

SIR,—I was pleased, though not surprised, to find that Dr. Wiblin was able to give such a favourable report of his experience of the treatment of hæmorrhoids by the clamp and cautery. Such testimony coming from a man in his position will serve much better than anything I can say to show the value of this mode of treatment, and it is obvious that his experience justifies him in speaking with authority on this matter.

I must, however, take exception to Dr. Wiblin's remark at the end of his letter. He says:—"The toy-like ivory appendage to Mr. H. Smith's instrument I regard as unnecessary, and only calculated to increase the already extravagant charges of the instrument maker."

Now, with regard to this point, perhaps you will permit me to state that, next to the securing of perfect parallelism of the blades of the clamp, I regard this "toy-like appendage" as the most important part of the instrument; and I can speak of it more freely as the suggestion to line the outside of the blades was due, not to myself, but to Dr. Vine, of Covent Garden, who assisted me in nearly all my earlier operations, and who always took a great deal of interest in the perfecting of the clamp. This ivory sheathing acts as a non-conductor of heat, and thus the heated iron may be applied very freely without the production of pain or damage to the parts upon which the clamp rests. Of course, if chloroform is used the metallic blades alone may be employed; but I should say that in more than fifty per cent. of my cases I do not give chloroform, and then it is we see the value of the "toy-like ivory appendage."

I have been anxious to give this explanation of the reason why I use the ivory sheathed clamp, because next to that almost absolute safety attending this treatment, as much freedom from pain as is possible to the patient should be sought for, and that object will be best attained by using a clamp possessing the "toy-like appendage" which my worthy friend thinks "unnecessary," but which I am sure he will always for the future use, after this explanation.

I am, Sir, your obedient servant,

Wimpole-street, Sept. 1868. HENRY SMITH.

## THE SANITARY CONDITION OF GUILDFORD.

THE following important letter appeared in *The Times* of Tuesday last:—

"Not long ago the Mayor of Guildford, in his zeal to vindicate his town from the charge of unhealthiness which had been brought against it, and to convince the public that it was a perfect Montpellier, furnished you with certain statistics of the rate of mortality in preceding years, which unfortunately, however, for his purpose, had no reference whatever to the present state of things.

"The death-rate of past years proves nothing in regard to the present sanitary condition of a place, and it is the present state of Guildford with which we have to deal.

"Now, what are the facts as regards the present condition of the town?

"There have been upwards of 500 cases of scarlet fever, and 40 deaths, in a population of about 10,000 inhabitants.

"This, it must be admitted, is a very serious state of things, and calculated to occasion considerable injury to the town, and yet it will scarcely be credited the authorities have done nothing, have taken no steps to arrest the progress of this terrible and fatal disease.

"It is not my present purpose to enter into the vexed question of the deleterious nature of the water, nor the disgraceful state of the drainage, both of which are well known to those who have the misfortune to reside in the town; nor do I mean to attribute the present outbreak of scarlet fever to either, or both, of those causes; but, as we suffered to a great extent last year from low fever, and in all probability may do so again next year, unless some steps be taken to purify the town, I have thought it right to endeavour to point out the fallacy of statistics which have reference only to the past, and are therefore calculated to mislead those persons who may have an interest in the present unhealthy state of the town of Guildford.

"I am, Sir, your obedient servant,

"H. C. HASTINGS,

"Guildford, Sept. 19th, 1868." Chief Constable of Surrey.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

THERE is at the present time quite an epidemic of fever in one of the suburbs of Liverpool. In Bootle, which is about three miles from the Liverpool Exchange, to Waterloo, which is seven miles, including Seaforth, Litherland, Ford, and Linacre, the fever has been for the last five weeks prostrating its victims in great numbers. Probably two hundred persons up to the present time have been attacked, and that without regard to station or condition in life; indeed, it might almost be said that the major part of the cases have been in the houses of the well-to-do. As yet there is no appearance of decline in the outbreak. At least twelve deaths have occurred from it. A large proportion of the cases are very severe. To particularise the form of fever is difficult; with some it has been well-marked typhus; with others, and perhaps the majority, it has been typhoid; and again, if we might draw a distinction between typhoid and gastric fevers, many of the cases could be more aptly placed under the latter head. The poison is evidently *sui generis*, and whether it obtains its specific character from the locality, or from the atmospheric conditions under which it was generated, or whether the varying forms into which it develops itself depend upon the constitutional peculiarities or defects which each patient presents, the epidemic has not shown to the usual extent that sameness of type and character which one generally sees in a similar outbreak.

The eruption has been present in many, but not in all instances. The tongue has been peculiar; in scarcely two patients has it been alike, often varying much from day to day in the same patient. In a few cases, after convalescence had apparently set in, a diphtheritic exudation has appeared on the tongue and fauces, and the patient has again been in a critical state for some days. This same thing happened in several cases during an outbreak at Oban, in September, 1865, and has been put on record by Dr. Black.

All that need be said on the point of treatment is, that a moderate amount of stimulants has been given in most instances. It seems such an established fact that defective drainage, or water contamination, or both, have to do with these outbreaks of fever, that the history of one is the history of all: therefore, we are warranted in assuming that this epidemic is in some way connected with one of these two.

The water-supply of all the district where the fever prevails comes from an artesian well at Bootle. This may possibly be contaminated through some defect by which surface drainage may find its way into it.

The drainage of the whole neighbourhood is defective, many new streets and houses being as yet undrained. As I may have some further particulars to give of this outbreak in a future letter, I will not now trespass more on your space.

September 22nd, 1868.

# Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 17th inst.:—

Hart, Walter, King's College Hospital.
Hill, Philip Edward, Cumberland-place, Bayswater.
Lovett, Samuel Robert, Southampton-street.
Norton, George Everitt, Middlesex Hospital.
White, William Leavens, Dundee Royal Infirmary.

The following gentlemen also on the same day passed their first examination:—

W. B. Taylor, Guy's Hospital; John Hopkins, St. Mary's Hospital.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following gentlemen obtained the licences in Medicine and Midwifery in May, June, July, and August last:—

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| Bacchouse, J., Carrick-on-Shannon. | Furniss, J. J., Dublin. |
| Bevan, D. W., Blackrock. | Gube, J., Wrexham. |
| Bodkin, P. J. T., Tuam. | Hadden, E., Maryborough. |
| Boyd, G., Castletown. | Hall, H. G., Dublin. |
| Bradley, J. K., Stonyford. | Kiernan, J., Dublin. |
| Bradshaw, R. F., Buncha. | Lord, J., Drumshambo. |
| Byrne, J. P., Drumdangan. | Lloyd, E. T., Dublin. |
| Chatterton, J., Ballynamate. | McGrath, T. J., Dublin. |
| Clerke, H., Dublin. | Mayne, R. St. J., Dublin. |
| Collins, E. W., Dublin. | O'Reilly, J., Kingscourt. |
| Connolly, P., Hill of Down. | Spence, R., Co. Wicklow. |
| Crawford, J., Longford. | Stannard, H., Bali's Bridge. |
| Crean, C. E., Ballinvila. | Torrance, G. H., Dublin. |
| Crean, J. J., Clonmel. | Walker, J. F., Boumahon. |
| Crean, R., Ballina. | Wallace, R. B., Trim. |
| Daly, M., Tyrrecou t. | Waring, F. J. A., Blackrock. |
| Fawcett, E., Blacklion. | Wilson, T., Longford. |
| Fraser, H., Gilford. | |

The following obtained the licence to practise Medicine:—

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| Anderson, C. J., Kilkeel. | Kelly, B., M.D., New York. |
| Barker, W. O., Dublin. | Kenny, J. B., Killeshandra. |
| Bruce, J., Kidderove. | Lyon, F. H., Boerea. |
| Curran, J., Dowra. | Owens, J., Dublin. |
| Duke, V. de S., Dublin. | Shea, H., St. John's, Newfoundland. |
| Graham, W., Royal Navy. | Walshe, T. P., Dublin. |
| Keenan, M. J., Dublin. | Worthington, G. F. J., W. Worthing. |

The following obtained the licence in Midwifery:—

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| Barton, J., Rathfarnham. | O'Donohoe, M., Frenchpark. |
| Botterell, J. A., Montreal. | Sanderson, W. H., Edenderry. |
| Churchill, F. J. n., Dublin. | Walsh, P. L., Kilfinane. |
| Fitzgerald, J. F., Tipperary. | Woodward, C. R., Dublin. |
| Mulligan, J. W., Aughnacloy. | |

THE Glasgow Agricultural Society have taken into consideration the disposal of the sewage of the city with special reference to the requirements of the farmers of the neighbourhood.

THE drainage and water works of Bedford are now completed, and are spoken of as being most successful.

THE Marquis of Westminster has just presented to the Westminster Hospital a further donation of £500.

UPWARDS of thirty cases of fever are reported to have occurred at Romsey in consequence of the want of proper flushing of the main sewer.

THE mortality from fever is greatly decreasing in Plymouth, the deaths in the last three months from that cause having been only 11, as compared with 29 in the preceding quarter.

ROYAL COLLEGE OF SURGEONS.—It is stated that at the recent preliminary examinations in arts, &c., at this institution, which extended over several days, and were conducted by a staff from the College of Preceptors, as many as 247 candidates presented themselves, of which number 21 passed for the Fellowship and 194 for the Membership of the College. These gentlemen can now enter on their hospital studies at the ensuing session, commencing on the 1st proximo.

THE "Times" correspondent at Naples calls attention to the disgusting state of the "temples of Cloacina" on almost all the Italian railways, and in many of the Italian hotels. Undoubtedly so serious an evil might easily be removed by proper surveillance; but it is necessary first of all to teach the authorities to look upon it *as an evil*, which they evidently do not at present.

SNAKE BITE.—The proprietor of a lager-beer saloon in Philadelphia, to add to the attractions of his establishment, had got together a small menagerie, and very recently purchased a rattlesnake about three feet in length, which is described as having been "quite a pet" with its former owner. With a foolish disregard of the natural characteristic of his latest acquisition, the tavern-keeper, having first done his best to irritate the serpent, had the temerity to take it in his hand, receiving instantly a bite which resulted in his death within forty-five minutes. Cauterisation and all other remedies, adopted immediately, were wholly powerless to stay the effects of the deadly venom.

MINERAL OILS.—Two explosions of mineral oils have lately taken place: one of petroleum on board a lighter at Antwerp, the other of "diamond oil" in the house of a grocer near Newcastle-upon-Tyne. In the latter case a jar containing two gallons of the oil was upset, and the inflammable liquid running over the floor to the fireplace of course became ignited, and exploded, causing serious harm to life and property.

CHANCELLORSHIP OF THE UNIVERSITY OF EDINBURGH.—We beg to inform our readers that the election to this office takes place at the end of next month, but only those who are enrolled in the new register now being made up, and which is closed for fourteen months on the 30th inst., will be entitled to vote. We therefore hope that none of the supporters of Mr. Gladstone, whose claims to the vacant office are so many and strong, will fail to secure their privileges by neglecting to register. We understand that it is not quite clear that persons claiming under the four sessions' clause of the new Act require to establish attendance for two sessions in Arts classes. We therefore strongly advise all those who before 1861 had attended four sessions at any classes in the Edinburgh University, to send a matriculation and a class ticket, and a certificate of attendance for each of those sessions to the Secretary of Mr. Gladstone's Committee, at 5, St. Andrew-square, Edinburgh, in order that their claims may be submitted for adjudication by the University Court, upon appeal.—*Scotsman.*

THE CONGRESS OF NAVAL HYGIENE AND MEDICINE AT HAVRE.—The first meeting is to take place on Monday, the 28th instant, at noon, and the last on the 3rd October at 5 o'clock P.M. Papers to be sent before the 25th inst., and thirty minutes allowed for each, which must have reference to naval hygiene and medicine. The following questions are submitted to the members as worthy of discussion, and we willingly transcribe them to acquaint our readers with the purport of the meetings:—

1. Should not every ship, before sailing, be inspected by medical men as to hygiene, especially regarding the quarters of the crew and passengers, the amount of sailors' clothing, and the quality and quantity of stores?

2. Is not the sanitary visit, which may be followed by the removal of men affected with syphilis, itch or tænia, the lame or predisposed to serious complaints, an indispensable measure?

3 Should not the distilling apparatus be used for large vessels? What are its advantages and drawbacks?

4. Are there goods or cargoes which may act prejudicially on the health of the ship's company? What dangers are thus encountered? How can they be avoided?

5. Which is the best disinfectant for ships?

6 Is the system of ventilation now in use trustworthy?

7. Are the medicine chests properly composed, and are the instructions for the captain sufficient? If not, what are the modifications to be proposed?

8. Should not the examination of captains of merchant vessels include elementary knowledge as to the use of the medicines contained in the chests?

9. Government do not require a vessel to carry a surgeon when the crew is below a hundred hands. Should not the number be reduced to fifty, passengers included?

10 Has steam navigation, which has superseded sailing vessels, acted prejudicially on the health of the men?

11. Are there diseases which a voyage or the sea air can modify?

12. What are the diseases peculiar to the African coast? and what are the preventive or curative means to be used as regards those complaints?

13 On yellow fever.

14 On the dysentery of hot climates.

15. Scurvy seems to occur now more frequently in long voyages. How is this to be explained?

16. Are there in China, Cochin China, or the far east, diseases peculiar to those countries.

17. On sea bathing and its therapeutic use?

Rewards and medals of gold, silver, and bronze will be distributed to the authors of the most deserving papers.

## MEDICAL APPOINTMENTS.

ANDERSON, D., L.K.Q.C.P.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Mossa Dispensary district of the Lurgan Union, Co. Down, vice William Torrens, M.B., resigned.

CAMPBELL, A., L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Barra, Inverness-shire, vice C. W. MacBury, L.R.C.P.Ed., resigned.

CARTER, C. H., L.R.C.P.Ed., has been appointed Medical Officer for the Parish of Alton-Barnes, in the Devizes Union, Wilts.

CHALMERS, J. E., M.R.C.S.E., has been appointed Resident Assistant Medical Officer to the Workhouse in Princes-road, Lambeth, vice F. J. Crapp, L.R.C.P.Ed., resigned.

CONNEL, J., M.B., C.M., has been appointed Surgeon to the County Prison, Peebles, vice J. B. Junor, L.R.C.S Ed., deceased.

GRAY, A. C., M.D., has been appointed Certifying Factory Surgeon for the District of Selby, Yorkshire, vice J. Burkitt, M.R.C.S.E., deceased.

LOCKING, J., M.D., has been appointed a Physician to the Islington Dispensary, vice A. Wiltshire, M.D., resigned.

LOUTTIT, J., M.D., has been appointed a Medical Officer for the East Greenwich District of the Royal Kent Dispensary, vice Thomas Miles, L.R.C.P.Ed., resigned.

MACLINTOCK, J. R., M.D., has been appointed Medical Officer for District No. 4 of the Church-Stretton Union, Salop, vice Wilding, resigned.

M'NICOL, J. C., M.D., late Resident Surgeon to the Leith Hospital and Dispensary, and Surgeon to the Edinburgh and Leith Amalgamated Humane Society, has been appointed Resident Assistant Medical Officer to the West Derby Union Workhouse, Walton-on-the-Hill, Liverpool, vice Dr. Laidlaw, resigned.

MARSHALL, F., M.R.C.S.E., has been appointed Medical Superintendent of the Lea-Pale House Lunatic Asylum, Guildford, vice W. S. Wilson, L.R.C.P.L., appointed Medical Officer for the Burnham District of the Eton Union.

NICHOLSON, Mr. W., has been appointed Resident Dispenser to the Ripon Dispensary and House of Recovery, vice Mr. W. Harper, resigned.

PRICE, J. E., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Hill District of the Crickhowell Union, Breconshire, vice Harris Butterfield, M.R.C.S.E., resigned.

RAINE, G. R., M.B., has been appointed House-Surgeon and Secretary to the Staffordshire General Infirmary, Stafford, vice C. H. Greaves, M.R.C.S.E., resigned.

SIMPSON, P. A., M.D., has been appointed Professor of Medical Jurisprudence in Anderson's University, Glasgow, vice Wm. Leishman, M.D., resigned.

TURNER, R., M.R.C.S.E., has been appointed Medical Officer for the new Workhouse of the Lewes Union, Sussex.

WEEKES, Dr. H., has been appointed Medical Officer and Public Vaccinator for No. 3 or Gillingham District of the Medway Union, Kent, vice H. Weekes, M.R.C.S.E., deceased.

WOOD, T. O., L.R.C.P.Ed., M.R.C.S.E., has been appointed Resident Medical Superintendent of the Dunston Lodge Private Lunatic Asylum, near Newcastle-on-Tyne, vice J. W. Eastwood, M.D., resigned.

# Births, Marriages, and Deaths.

## BIRTHS.

BAKER.—On the 20th inst., at Thirsk, the wife of Dr. Baker, of a daughter.

BONNOR.—On the 18th inst., at Saint Owen-street, Hereford, the wife of W. J. Bonnor, M.R.C.S., of a son.

BRITTON.—On the 7th inst., at Acacia-road, St. John's-wood, the wife of W. S. Britton, M.R.C.S.E., of a son.

BROWNE.—On the 9th inst., at Camberwell-grove, the wife of Chas. Browne, M.R.C.S.E., of a daughter.

COLLUM.—On the 15th inst., at Croy, Surbiton, the wife of R. Collum, M.D., of a daughter.

DIAMOND.—On the 9th inst., at Dudley Villa, Brixton, the wife of Dr. W. H. Diamond, of a daughter.

HENDERSON.—On the 10th inst., at St. Leonards-on-Sea, the wife of J. Henderson, M.D., Madras Army, of a son.

LANE.—On the 11th inst., at Dublin, the wife of Surgeon Lane, 4th (the King's Own) Royal Regiment, of a daughter.

SANSOM.—On the 23rd inst., at Duncan-terrace, N., the wife of Arthur Ernest Sansom, M.D., M.R.C.P., of a daughter.

SAUNDERS.—On the 7th inst., at Cuckfield, Sussex, the wife of C. E. Saunders, M.D., of a daughter.

STOVIN.—On the 6th inst., at Wheatley, Oxfordshire, the wife of C. F. Stovin, M.D., of a daughter.

## MARRIAGES.

DAVIES—LAMBERT.—On the 17th inst., at St. Michael's Church, Two-mile-hill, Gloucestershire, T. H. W. Davies, M.R.C.S., of Gloucester-road, Bristol, to Ellen Matilda, youngest daughter of Charles Lambert, Esq., of Fillwood House, St. George's, Gloucestershire.

GREGORY—HOTHER.—On the 16th inst., at St. Stephen's, Tunbridge, Charles Foster Gregory, Surgeon, of Leigh, to Catherine, daughter of the late John Hother, Esq.

ROWELL—GALE.—On the 4th ult., at St. Andrews Church, Singapore, Thomas Irvine Rowell, M.D., of Singapore, to Maria Grace, third daughter of John Gale, Esq., of Oakfield, Cheltenham.—No Cards.

RUSSELL—DAVIDSON.—On the 3rd inst., at Saxe Coburg-place, Edinburgh, James B. Russell, M.D., of Glasgow, to Helen Fenton, eldest daughter of the Rev. Dr. Davidson, of Queen-street United Presbyterian Church.

SHORTO—CAPLEN.—On the 15th inst., at Shirley, near Southampton, J. B. Shorto, M.R.C.S.E., to Frances Jane Blake, daughter of C. Caplen, Esq.

## DEATHS.

JACKSON.—On the 9th inst., Charles Jackson, L.S.A.L., of Barrow-on-Humber, aged 62.

JOHNSON.—On the 11th inst., John Whitaker Johnson, F.R.C.S.E., of Derby, aged 70.

JOLLEY.—On the 24th ult., at sea, on board the Ship "Harkaway," Dr. John T. S. Jolley, of St. Peter's College, Cambridge, and of the Government Emigration Service.

KELLY.—On the 14th inst., R. Kelly, M.B., of Drogheda, aged 59.

LAWTON.—On the 2nd inst., John Lawton, M.R.C.S.E., of Chiddingfold, Surrey, formerly of Boxford, Suffolk, aged 68.

PASCOE.—On the 7th inst., at Cubert, W. Pascoe, Surgeon, formerly of Chacewater.

THURSFIELD.—On the 5th inst., Richard Thursfield, M.R.C.S.E., of Broseley, Shropshire, aged 66.

VINCENT.—On the 27th ult., Philip Vincent, M.R.C.S.E., of Camborne, aged 40.

WRAITH.—On the 17th inst., at Over Darwen, Frances Maud, third daughter of the late Samuel Hope Wraith, F.R.C.S., aged 13.

# Medical Diary of the Week.

### Monday, Sept. 28.

ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 1½ P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

### Tuesday, Sept. 29.

ROYAL FREE HOSPITAL.—Operations, 9 A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

### Wednesday, Sept. 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
OPHTHALMIC HOSPITAL, SOUTHWARK.—Operations, 2 P.M.

### Thursday, Oct. 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

### Friday, Oct. 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

### Saturday, Oct. 3.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

# To Correspondents.

THE ANTI-VACCINATION LEAGUE AT BRIGHTON.

THE Anti-Vaccination League seems very indignant at the general earnestness which is noticeable in the application of the Vaccination Act. A certain Mr. R. B. Gibbs has been representing the League in a very ireful and declamatory harangue at Brighton. The weakness of the argument was atoned for by the strength of the language used. Jenner was a great impostor. Mr. Simon was a tyrant, entirely demoralised by £1800 a year. Our poor selves have been mysteriously corrupted, and the lecturer believed that a large amount of bribery had been going on. The Chairman declared that 450,000 persons now die annually of small-pox. The locality of all this mortality was not given; probably that of the moon was included in the imagination of the Chairman, Dr. Stowell, who enjoys the title of M.D. from New York. Logic is not the *forte* of popular lecturers; but it was woefully wanting in this lecture, which argued that because Mr. Simon got £1800 a year, Boards of Guardians were made slaves. The side of sense and health was well represented by Mr. Richardson and Dr. Beard. It seems entirely triumphant in the country. Men are submitting with a natural resignation to a law which simply forbids them to have small-pox, by which not only their own lives are imperilled, but the lives of all with whom they come in contact. Not a nurse of the Small-pox Hospital has suffered from small-pox for twenty years! This result is due to revaccination. That people have the small-pox after being once vaccinated, is an argument for vaccinating them twice, not for not vaccinating them at all. The propagation of specific disease by vaccination is so rare as to be a disputed point in medical science, and to be entirely unworthy of regard as an argument against a practice for the prevention of an evil like small-pox. Of the statement that consumption is communicable by vaccination, it is more than enough to say that it rests on the authority of Mr. R. B. Gibbs.

*A Medical Student.*—The licence to which our correspondent refers does not confer the title of M.D. The diploma of the Apothecaries' Hall is not given up on taking the qualification named.

*Senex.*—1. MAYNE'S Medical Lexicon (published by Churchill and Sons, New Burlington-street) and Dunglison's (Trübner and Co., Paternoster-row) are both good. The last edition of Hoblyn is cheaper, however, and would probably answer our correspondent's purpose.—2. The food is composed of several phosphates, that of iron being the chief.

*Mr. W. Turner* (Stepney) writes to say that he was bitten by a cobra some few years ago, and that he is in possession of a remedy for the effects of the poison.

*A Certifying Surgeon.*—The subject shall be commented upon next week.

THE NATURE OF THE FEVER IN THE MAURITIUS.

THROUGH the courtesy of Professor Laycock, of Edinburgh, we have received a communication from Dr. Labonté, a physician practising in Port Louis, in which he states grounds for the opinion that much of the fever in that city is morphologically allied to the cerebro-spinal form of typhus witnessed on the Continent, and more especially of Southern France, and the Purpuric fevers of Ireland. Professor Laycock, it appears, first made the suggestion to Dr. Labonté of their possible connexion. Dr. Labonté describes the nervous complications as equally frequent amongst the adult and infant patients; and adds that these show themselves by convulsions, epilepsy, paralysis, and other nervous phenomena. The attacks have been very sudden and very fatal, and the symptoms, which have persisted until death, have been those of the tetanic condition—fixed eyes, closed jaws, the limbs rigid, hands clenched, and the breathing stertorous. The hæmorrhagic or purpuric is a far less fatal form of the disease. The mucous membrane of the mouth appears to be the most frequent source of the hæmorrhages; the skin of the extremities, the inferior in particular, at the same time presenting a spotted, petechial aspect, and the surface of the tongue being similarly affected. Alluding to the occurrence of jaundice and renal hæmorrhage, he speaks of the aggravation of the symptoms produced by the exhibition of quinine, and particularly of the apparent influence of this drug in inducing or aggravating renal hæmorrhage. There may have been different forms of fever prevailing in the Mauritius, such as typhus and enteric fevers, and particularly the latter; but all that we have heard and read has unmistakably led to the conclusion that by far the largest amount of disease was the result of different varieties of malarious fever. An adynamic, nervous form, in which the patient is suddenly attacked with well-marked nervous phenomena, and becomes comatose, is pretty well known. Persons who have been attacked by fever in the Mauritius, and indeed some who have never suffered during their residence in that island, have exhibited symptoms of the ordinary forms of ague since leaving it, and been cured by quinine; while we know that the medical officers of the 13th Regiment treated their men with large doses of this drug with the most remarkable success.

*An Amateur Agriculturist.*—The letters which have appeared in *The Times* from Mr. Mechi and others on "Thin Seeding" have a real practical value, which ought to commend them to agriculturists. The crowding of seed, like the crowding of human beings, is certain to be obnoxious to strong and vigorous growth in the crop processing therefrom.

*Querens.*—We see no objection to any of the rules of the proposed Club, save in regard to the 9th. As a matter of policy only, it would not be advisable that the medical officer should be the permanent Chairman of the Committee.

*Legat.*—The work may be obtained, we believe, by applying to the Registrar of the College of Physicians.

*R. F.*, (Scourbridge.)—The gentleman is M.R.C.S. 1863 and L.S.A. 1864.

DR. LYON PLAYFAIR AND THE POOR-LAW MEDICAL SERVICE.

*To the Editor of* THE LANCET.

SIR,—I shall feel obliged by the insertion of the enclosed correspondence between myself and Dr. Lyon Playfair, C.B. It appears to me that this gentleman takes a comprehensive and liberal view of the Poor-law medical question.

It would be most disastrous to the interests of the profession if, through apathy or division, a lawyer should get into Parliament for these Universities, more especially a supporter of the present Government, and therefore of Earl Devon, during whose tenure of office such additions have been made to the burdens, and consequently the grievances, of Poor-law medical officers.

I am, Sir, yours obediently,
Dean-street, Soho, September 21st, 1868. JOS. ROGERS.

Dean-street, Soho, September 17th, 1868.

SIR,—I have to acknowledge the receipt of a letter dated September 8th, signed by several medical gentlemen, all well known as distinguished for their professional and scientific attainments, urging me to record my vote in your favour as the representative of the conjoint Universities of Edinburgh and St. Andrews.

Having regard to your published political opinions, and the high testimony thus rendered of your fitness as a scientific authority to represent these Universities in Parliament, I confess that under ordinary circumstances I should at once defer to their views, and give in my adhesion as one of your supporters; but before finally deciding, may I be allowed to inquire what are your views in reference to a modification of the existing arrangements for the treatment of the sick poor in England and Wales. I do so for these reasons. Having directed my attention for many years past to this question, I am in a position to assert that nothing can possibly be more unsatisfactory than the present system. The salaries paid to medical officers in a large majority of instances are so clearly disproportionate, that if the *poor are properly attended to*, it is at the cost of the time and means of the medical attendant. Nor is this all: the salaries are based upon no principle. Too frequently in the same union the officer who has the least to do has most remuneration, favouritism being apparently the grounds upon which such payments are apportioned; and although the State has made provision that half the medical officer's salary should be paid from the Consolidated Fund, the central authority deputed to settle these matters looks on with callous indifference; and if the medical officer, impressed with the faulty arrangements around him, exerts himself to bring about a change, and thereby excites the anger of the local authority, he is, on appeal, generally sacrificed by the Poor-law Board, which body appears to have latterly degenerated too much into a clique of selfish office-holders.

Having the honour to be the President of the Poor-law Medical Officers' Association, consisting of upwards of 800 members, and which is daily increasing, may I be permitted to submit to you their objects. They are as follows:—

1. To obtain life appointments for all Poor-law medical officers, and entire, instead of partial, payment of salaries from the Consolidated Fund, and thus to secure at once due recognition of their position as public servants, and greater freedom and independence of action.

2. To provide a basis for consultation and united action in all cases of difficulty arising out of the nature and in the discharge of their duties.

3. To obtain adequate remuneration for medical officers upon a uniform basis, and the adoption of the per-case system of payment where practicable.

4. To obtain the same payment for operations in the workhouses as in the districts, and an extension of the list of operations for which extra fees are paid.

5. To obtain an authoritative decision upon questions relating to duties and extra medical fees.

6. To obtain for medical officers the responsible control of all midwifery cases.

7. To obtain from the local authorities the provision of all medicines and appliances prescribed for the sick poor, and the employment and payment by the same of qualified dispensers where practicable.

8. Generally to raise the status of medical officers, and thus increase their influence and power for usefulness, and to provide a channel through which all defects in the Poor-law medical service may be brought to light and discussed with a view to their removal or amelioration.

In addition, I may state that at a large and important aggregate meeting of Poor-law medical officers, held on the 24th June last at the Freemasons' Tavern, a condensed report of which I forward you, a resolution was unanimously adopted that, with the view to more efficient administration of the poor laws, the Poor-law Board should consist of a definite number of responsible members; and, as the present arrangements for the treatment of the sick poor are unsatisfactory, that the control of all medical arrangements, including the fixing of the salaries of medical officers, should be immediately subject to a special medical department.

I trust you will excuse the length of my communication. The subjects touched on are important, not only to the interests of medical officers, but of the sick poor; and if, Sir, on consideration you decide that our views are reasonable and just, and, if returned, will lend your aid to get them carried into effect, then not only will I record my vote in your favour, but will use my influence with all my fellow-graduates who are members of the Association to do the same.

I have the honour to be, Sir, yours obediently,
JOS. ROGERS,
President of the Poor-law Medical Officers' Association.

Dr. Lyon Playfair, C.B.

Edinburgh, September 19th, 1868.

SIR,—I have the honour to acknowledge your letter of the 17th instant, in which you draw my attention to the unsatisfactory condition of the Poor-law medical officers, and ask me whether, if returned to Parliament, I will give my aid to rectify these abuses. Had your letter asked from me pledges in regard to specific points of this desired reform, I should have declined to give them; but, as I understand you desire only to elicit from me a general expression of opinion on this important subject, with this understanding I have no hesitation in replying frankly to your letter.

The unsatisfactory position of the Poor-law medical officers is only one instance of that administrative ignorance of the wants and wishes of a learned profession which has produced a state of chronic discontent in all branches of our public medical services. It is perhaps more marked in the Poor-law service, because the duties of the medical officers are peculiarly laborious and irksome, and because they affect upwards of three thousand men in your profession. Some of the evils are so palpable that they could not be allowed to exist if the public were aware of them. To give a miserable salary to a medical officer, and to compel him, out of that, to provide medicines for the poor patients, is an amazing instance of mal-administration. I am aware that the Poor-law Board have made a faint attempt to remedy this; but I am not aware that their effort has been largely successful. To add inspectorial duties to the Poor-law medical officers without remuneration, and as a supplement to their existing underpaid work, is not an administrative invention likely to remedy the grievous abuses which recent workhouse inquiries have brought to light. I have no doubt whatever that such palpable errors of administration have augmented pauperism instead of checking it, and have wasted the resources of the country instead of husbanding them.

Your Association does well to give your views as to the means of remedying the evils of which you complain. Though I have read for years all the discussions on the question, as they have fallen under my attention, I do not profess to be so thoroughly acquainted with it as to justify me in going into the details of your recommendations, though I think your aim is right, and tersely comprised in the eighth article of the objects given in your letter.

I would rather that your letter had reached me after the election than before it, for I could not then have been suspected of an interested motive when I reply that I think it is the duty of any representative of Scotch Universities, containing as they do such a large proportion of medical constituents, to give earnest attention to the removal of those causes which have rendered the Poor-law medical service and the other public medical services of this country so unpopular among the great body of your profession.

Sir, I have the honour to be your obedient servant,
LYON PLAYFAIR.

Joseph Rogers, Esq., M.D., President of the Poor-law Medical Officers' Association.

*Mr. L. Woulfe-Brenan.*—We very much doubt the wisdom of commencing the study of the profession under the circumstances; but our correspondent will find the fullest details in the last Students' Number of THE LANCET.

"THE MIDLAND SELF-SUPPORTING DISPENSARY."

A CIRCULAR announcing the nature of this institution, and the terms upon which its benefits are to be received, has reached us. A payment of 3*s.* 6*d.* entitles the holder to fourteen days' attendance; vaccination for nothing, and "midwifery at reasonable fees," are among the other attractions set forth. On the fly-leaf of the circular is an advertisement, in the druggist's style, of the celebrated anti-cholera mixture, an infallible ointment for eruptions on the face; gout and rheumatic mixture, &c. &c. We looked for the druggist's name; but the only name on the circular is that of A. C. Hopton, M.D., M.R.C.S.E. The man who shall devise a self-supporting dispensary which shall preserve at once the independence of the poor and the dignity of the medical officer, will be entitled to great praise. We need not say that Dr. Hopton, in our opinion, has not earned this praise.

*One who would like to join the Army.*—The expense of outfit, &c., would not, we think, exceed £50.

### THE CASE OF SURGEON-MAJOR HINTON, OF THE BENGAL ESTABLISHMENT.

We have perused a copy of this officer's memorial to the Secretary of State for India, and the correspondence which has ensued thereon. The case certainly appears a hard one, and Surgeon-Major Hinton's services have been of so arduous and valuable a character, embracing as they have done six campaigns, as fairly to entitle him to every consideration. The regulations relative to retirement, as conveyed in the extracts from the despatch of the Secretary of State of August, 1864, and in that from the General Orders by the Government of India of June, 1861, are somewhat ambiguous; but their intention would appear to us to have been to prevent officers serving after fifty-five years of age, whose competency or fitness for duty had not been fully certified. In the case of Surgeon-Major Hinton, it would seem that the Medical Board before whom he appeared, owing to some misconception possibly of his wishes, reported him as fit for duty in India, and he could not therefore claim the higher rate of retiring allowance. The Indian authorities have not unnaturally acted upon the decision of the Medical Board, refusing alike the higher rate of retiring allowance, and their permission to Surgeon-Major Hinton to reappear before a Medical Board, although, in addition to his original impairment of health, he has since received an injury of the leg, for which he has been under the care of Mr. Pollock, of St. George's Hospital.

*A Country Surgeon.*—The Pharmacy Act provides that no one shall be registered as a chemist and druggist who has not kept open shop for the compounding of medicines. The mere keeping of a few drugs by grocers, drapers, &c., will not constitute a title to registration.

*R. W. B.*—We do not give professional advice. We may, however, say that the use of a sponge-bath and horse hair gloves is generally considered a healthy practice, and the first medical man was, no doubt, right in recommending it.

### THE SICK CLUB QUESTION.

*To the Editor of* THE LANCET.

SIR,—Would you kindly allow a little space in order to see if we can clear up some apparent contradictions on the above subject.

Firstly, Mr. Salisbury, of Oldbury, addressing Dr. Nelson on August 12th, says: "I regret to find you entertain opinions regarding the question in point diametrically opposed to the majority of your *confrères*, as evidenced in the replies I have received from them."

Secondly, Dr. Nelson, in his reply, dated 15th August, says to Mr. Salisbury: "Those who differ from you in this matter—and I don't think they are deficient either in weight or number—claim as great a desire as yourselves to elevate and benefit the profession in every possible and honorable way. They only doubt the advisability of the means now adopted in demanding of all your brethren, as consultants, but they shall not, under the penalty of exclusion by you from practice, meet certain practitioners who have the same qualifications as yourselves, but who have committed the offence of taking your former situation, as you aver, a shabby manner."

Thirdly, Mr. Garman, of Wednesbury, writing to you in allusion to the same question on August 18th, asks Dr. Nelson, and at the same time all the consulting members of the profession, if they are indifferent about the Club matter, and then says: "It would appear so; for the majority of the physicians and consulting surgeons have stood by, have watched the contest, and have made no sign."

Fourthly, Mr. Manley, of West Bromwich, in your impression of last Saturday (Sept. 19th), further says in respect of the Club question and the newcomers: "I have before me documentary evidence from three-fourths of the consultants. I have had personal interviews with many of the remaining fourth, and I am pleased to say that, with few exceptions, and some of them were retired practitioners, they are prepared to act in such a way as to meet with our approbation."

Surely this requires some clearing up as a mere matter of fact. I confess myself astonished at such contradictories, and call upon Mr. Manley to prove the truth of his statement by publishing the names of those who meet with his "approbation" or who do not, so that the profession here, and at large, may draw a just conclusion on the subject by a comparison of their names and numbers. I may add that I am not as yet a consultant, neither have I ever held club, parish, or any other such appointment, and therefore am quite impartial upon this subject, and free from all class prejudices.

Awaiting a sight of Mr. Manley's list of "Pares" in medicine, surgery, or the other specialties,

I am, Sir, yours respectfully,

September 22nd, 1868. A BIRMINGHAM GENERAL PRACTITIONER.

*Anti-Gout.*—The subject is most important, and has our serious consideration. We regret that our correspondent's letter is too long for insertion. What remedy does he propose for the evil of "swarming"? That is the difficulty.

### "POISONING AND THE POLICE."

A CORRESPONDENT in *The Times*, referring to the refusal of a policeman to take in charge, save on the doctor's responsibility, a woman who had been sent to hospital after an attempt to poison herself with laudanum, suggests that as the medical man in such cases cannot tell by whom and for what purpose the poison was administered, the laws should give the medical man power, by stating the fact of poison being found in the system of a person, to require the case to be properly investigated. Now, the medical practitioner has nothing to do with inciting prosecution. That he should be called upon to "charge" this or that person is none of his duties. In cases of this kind he should simply be summoned as a witness to give evidence in a court of law as to the facts of the case which have come under his observation.

*M. C. P.*—We really cannot forward private answers to correspondents. We cannot recommend any dentist by name, nor do we know of any who would administer the agent by himself. Let our correspondent consult some one—Dr. Buxton, for instance—who has had experience in the use of the gas.

*An Unqualified Assistant.*—It is necessary that a certified vaccinator should possess a legal qualification.

### RAILWAY TRAVELLING.

WE were lately discussing the influence of railway travelling on health with a Government official, who has to make long journeys by rail probably more frequently than anyone not actually engaged on a railway. His experience may be of use to others, and we therefore give it. He is a man of powerful physique, and possesses, besides, a very strong head, so that he is capable of more endurance than most men. Railway travelling unquestionably tells on the health in more ways than one, as the readers of THE LANCET need not to be reminded. He tells us that when he first commenced making such journeys, he tried night travelling, but he found he could not sustain this. He then took trains by day time; but the loss of exercise, the closeness of a railway carriage, and the irksomeness of maintaining one position, induced headache and nervous irritability. He now makes a point of travelling, whenever practicable, between five or six P.M. and one A.M., dining before starting, in consequence of having discovered that, to use his own word, it takes "less out of a man" at that time than at any other. It is obviously easier to sleep after dinner, and there remains a sufficient period for obtaining a fair night's rest.

### MEDICAL REPRESENTATION OF THE UNIVERSITIES OF EDINBURGH AND ST. ANDREWS.

WE have received several letters relative to the candidature of Dr. Prosser James for representing the above Universities in Parliament. We have not a word to say against the principles he professes, and we may credit him with being animated by a sincere wish to serve the profession to which he belongs; but, to speak frankly, we do not believe he has any chance of being returned, or that he possesses the qualifications of Dr. Lyon Playfair. We hold, therefore, that if Dr. Prosser James desires the success of the principles he advocates, his candidature is unwise. By every vote he obtains he imperils the medical cause, and does not enrich himself.

*A. W. P.*—The hair cannot be turned permanently grey by artificial means. It may be temporarily bleached by alkalies.

### CALOMEL IN DIARRHŒA.

*To the Editor of* THE LANCET.

SIR,—The letter that appeared in your last week's impression from Mr. Laver to Dr. Bree, concerning the treatment of diarrhœa by calomel, broached by that gentleman as a new practice, deserves comment. It has indeed, and has had, many advocates for years past, and, like many other remedies in certain diseases, its praises have been extolled and sung by many, but soon afterwar a to be discarded and thrown aside for something more simple and, I need scarcely add, more beneficial and useful. But I must say I was not a little surprised to see a gentleman of Dr. Bree's experience treating it as a novelty.

It appears to me, from the symptoms described by Mr. Laver, to be the common epidemic or sporadic diarrhœa which is so prevalent in our towns during the months of August and September, characterised by vomiting and diarrhœa, accompanied by burning pain at the epigastrium, cramps, cold perspirations, clonic spasm of the lower extremities, great prostration of strength, &c. &c., sometimes accompanied by syncope and death. The predisposing cause of such a train of symptoms is probably due to, or depends upon, certain hygrometric changes or exposure to atmospheric deviations of temperature, or, to use the words of Dr. Farr—viz., that diarrhœa was eminently observed in English towns when the temperature rises above 60° F., as bronchitis and catarrh when the temperature falls below 30°;—other causes being gastric irritation from ingested indigestible food. But although this theory is one that might lead an individual to suppose that an eliminative remedy might be useful to get rid of the irritating matter, yet experience has proved that we have remedies sufficiently well calculated to effect its cure without running headlong to the employment of such patent drugs, the use of which is now supposed to have been lately discovered by a chance dose being administered by Mr. Laver's rural dispenser, in the form of an old woman, and which, after all, in English practice is, I fear, fraught with too many painful and untoward symptoms to admit of its frequent use.

Your obedient servant,

Colchester, September, 1868. C. J. WORTS, M.R.C.S.

P.S.—Would Mr. Laver be kind enough to inform me upon what grounds he bases his theory for its administration, since it appears that he does not recognise it as an eliminative medicine in this disorder.

### THE GENERAL HOSPITAL, BIRMINGHAM.

AT their annual meeting on the 16th instant, the Governors of the above hospital made some important changes in the mode of electing the honorary medical staff. The chief modifications consist in the limitation of the time for filling up the vacancy, and the substitution of the following plan of voting for the personal attendance of the Governors:—

"In the event of a poll, every Governor shall be allowed to vote either in person or by a voting-paper in the form in the appendix, signed by the Governor in the presence of and attested by a witness; or, if the Governor be a Corporation, then sealed with its common seal, and attested in like manner.

"No voting-paper shall be valid unless it shall be signed after such vacancy has been announced to the Weekly Board, and unless it is deposited with the House Governor and Secretary at least forty-eight hours before the holding of the special Board at which the election is to take place."

We have often commented on the abuses to which the old system was liable, and we are now glad to congratulate the hospital on having materially diminished them. We believe that the appointment of an Election Committee, selected by ballot on the occurrence of a vacancy, would have been a still greater improvement; nevertheless, the change effected will save future candidates that lavish expenditure which disgraced the old system, especially if the hope expressed at the meeting "that the medical profession would discontinue the employment of paid agents and public advertising" be realised. We heartily join in this hope, and trust our brethren will see to its fulfilment.

THE APPOINTMENT OF HOMŒOPATHS TO HOSPITALS.

*Medicus.*—It We distinctly hold that the medical staff of any hospital to which an avowed homœopath is elected should resign their appointments. We assume that they altogether repudiate homœopathy; but by acting in concert with one of its professors, they do practically countenance it, or at any rate they lead the public to imagine that the subject involves no material principle. The homœopaths, perceiving the absurdity of their infinitesimal doses, have begun to abandon that position, and shelter themselves behind the dogma of "similia similibus curantur;" or they adopt the practice of being "all things to all men," allopath or homœopath by turns—deferring, in short, to the judgment of their patients that which ought to be decided by themselves. Before a man be appointed to a public hospital, the Governors and medical staff ought to know clearly what he professes; whether he will use the British Pharmacopœia, and the principles on which his use of it will be guided; and they can then act accordingly.—2. The resident medical officer would frame his course in accordance with that pursued by the medical staff. The reasoning which would apply to the one would affect the other.—3. The post of physician to an hospital generally requires a man to be a M.R.C.P.; but the rule is not invariable at all hospitals.

THE MEDICAL CLUB.

*To the Editor of* THE LANCET.

SIR,—"A London Member," in your last impression, asks for further information respecting the extent to which it will be necessary to increase the subscription, provided the plan proposed in my former letter is adopted, of raising a capital in the form of shares or debentures.

Permit me to state, in reply, that I think it would be better to defer the discussion of the question suggested by your correspondent until the general meeting has taken place, and the members have had an opportunity of expressing their opinions more fully upon the subject. Experience has shown that it was a mistake originally to fix the amount of the annual subscription so low.

Now that the expense and trouble have been gone through to establish and conduct the Club thus far, I hope that the members will be able to decide upon the adoption of some plan at the meeting on the 14th of October that will prove satisfactory to all parties. It occurred to me that it would be desirable to raise a fund in the form of shares or debentures on the security of the furniture, such shares or debentures to bear interest at the rate of five per cent. per annum. The plan of raising money on debentures upon the security of the property of the Club is perfectly safe and regular. I believe in some form or other, and at some period of its history, every Club in London has supplemented its funds in that manner. We should require to raise upon debentures about £1000, the half of which sum, I am happy to say, has already been promised. I shall be very glad to furnish any further information in my power to members desirous of taking debentures, also to receive their names, together with the particulars of the sums they propose to invest.

I am, Sir, your obedient servant,

September 21st, 1868. LORT MARSH, Hon. Sec.

*T. O. W.*—There are several others; but we do not know of any more practical work. Perhaps the treatise published by Dr. Sankey would meet the requirements of our correspondent.

*A Traveller.*—The absence of lavatories at many of the railway stations of the kingdom shows a want of appreciation of the comfort of travellers which is not creditable to Boards of Directors.

THE NOMENCLATURE OF DISEASE.

THE Registrar-General thus defends the use of the term "cholera" in his reports, against which we last week raised some objection:—

"It may be right to state that the disease commonly called 'cholera' has been from time immemorial prevalent, and frequently epidemic, in Europe. 'It sets in,' says Sydenham, 'at the end of summer and the beginning of autumn, as truly as the swallow comes in spring, or the cuckoo sings in summer.' This disease is perfectly designated in the weekly tables by the word 'cholera,' and cannot be so well expressed by any other term. It is this disease which has been very prevalent this hot summer in London, in Paris, in Vienna, and no doubt in the cities of Spain, although the authorities there do not publish the facts. Each fatal case in adults in London of a severe character is described and published in the words of the medical certificates, which have in a few cases applied the terms 'Asiatic cholera' to severe rigid cases of common cholera. But no one acquainted with the subject can mistake such an epidemic of common cholera for an epidemic of Asiatic cholera. What is wanted is a true return of the fatal diseases of the cities in which quarantine reigns in all its rigors, and opportunities of studying the high rates of mortality, from which the people suffer under that regimen."

It unfortunately happens that the number of those "acquainted with the subject" is not by any means great, and that practically a majority of readers of the public journals know no distinction between the simple and malignant forms of cholera. The Registrar-General's objection to quarantine is well known; but we fail to see how such a return *from* foreign cities as he refers to will convey to the authorities of those cities correct ideas about the nomenclature adopted in this country. Our object last week was to show that the use of the new nomenclature, which has received the sanction of the heads of the profession, and which it was understood had been approved by Dr. Farr, would avoid the chance of such a misapprehension as that into which the Spanish authorities fell. Such is still our opinion, and we venture again to express a hope that the Registrar-General will meet the wishes of the profession by not refusing his co-operation in respect of the adoption of the nomenclature in his Returns.

*M. Paris.*—"Caput cæcum," or, more correctly, "caput cæcum coli," means the part of the intestinal canal lodged in the right iliac fossa, where it is retained by a fold of peritoneum, which is seated between the termination of the ileum and the commencement of the colon, and to which the vermiform appendix is attached.

* *The Shilling Dispensary.*"—Beneath notice.

ORIGINAL testimonials and diplomas are continually being sent to this Office in answer to advertisements in our columns. We caution our readers against this practice, as it sometimes happens that those testimonials are not returned to their rightful owners, or they are liable to be used unfairly by those into whose hands they may chance to fall. Copies only should be sent.

*A Subscriber of Seventeen Years.*—We regret to be unable to answer the question precisely at the moment, but will reply to it next week.

*J. B., L.R.C.P., L.R.C.S.E.*, (Wakering.)—Two guineas would be a fair fee for the first double duty of examination and evidence; but there is no fixed rule in police courts. For evidence at sessions, a guinea a day is the general fee. Liberal travelling expenses should be allowed.

DRUGGIST'S LATIN.

THE new regulations of the Pharmacy Act have not come too soon, if we may judge from the slavish with which some of the trade endeavour to impress the public. The following are specimens to be found in large letters in a very attractive shop in Derbyshire:—"PUL. TERRA. PUL. ROT. LAP. SEM. MAW. BRUNS. VIRID. VENAT. RUBR. LAP. ROT. OP."

COMMUNICATIONS, LETTERS, &c., have been received from—Sir H. Thompson; Professor Laycock, Edinburgh; Mr. Hancock; Dr. Burdon Sanderson; Dr. Cobbold; Mr. Haynes Walton; Dr. Sansom; Mr. J. Z. Laurence; Mr. Robertson, Eltham; Dr. Corner; Dr. Morgan, Bath; Dr. Macnamara; Dr. Coats; Dr. Reynolds; Mr. Jones, Lampeter; Mr. Chambers, Eynford; Mr. R. Fenn, Newmarket; Mr. Nicholl; Mr. Alderney; Mr. Grove, Kingswood; Mr. R. Lamond, Edgeware; Mr. Worth, Colchester; Dr. Buchanan, Brighton; Dr. Lewis; Dr. Jaksor; Messrs. Wyman and Co.; Mr. James; Dr. Leedam, Iver; Mr. Roberts; Mr. Milner; Mr. Mason; Dr. Bell, Pudsey; Mr. Thomas, Mr. Hicks; Dr. Curran, Spalding; Dr. Grimshaw, Dublin; Dr. F. O'Conor; Mr. Watson; Dr. Byass; Mr. Woulfe-Brenan; Mr. Francis, Odiham; Mr. R. L. Johnson; Dr. J. Clark M'Nicol, Walton; Mr. Lubbock, Dr. Warren, Princes-Risborough; Mr. Tilley; Mr. Hamond; Mr. Mudge, Bolsmin; M. Joh. Heiberg, Christiania; Dr. Sempter, Clay-next-the-Sea; Mr. Bonnor, Hereford; Mr. Trotter, Lincoln; Dr. Campbell; Mr. Kennett; Dr. Foster, Hitchin; Mr. Law; Mr. Wraith, Over Darwen; Mr. Eagleton; Mr. Prior; Dr. Lory Marsh; Dr. Selby; Mr. Turner, Stepney; Mr. Bradley; Dr. Macleane, Dundee; Mr. Hingston; Mr. Calvert; Mr. Arnold, Durham; Mr. Durkens; Mr. Crampton, Galashiels; Mr. Smith, Dursley; Dr. Marsh, Littlemore; Mr. Brown, Manchester; Dr. Gill, Dover; Mr. James Lane; Dr. Tucker; Mr. Parsons, Bedminster; Dr. Symon, Salford; Mr. Dobson, Bristol; Mr. T. Gilbert; Mr. Coldstream, Edinburgh; Dr. Hilton, Skilmersdale; Mr. Haldane; Mr. Thorne; Dr. Brown; Mr. Riley, Wymondham; Mr. Whitehead, Cambridge; Mr. Remington; Mr. Peirce, Brynmawr; Dr. Wadsworth, Emsworth; Mr. Whalley; Mr. Creasy; Mr. Dixon, Preston; Mr. Prince; Mr. Challener; Delta; One who would like to join the Army; A. W. F.; Anti-Cant; A Resident Surgeon; Senex; A Country Surgeon; Nescio; J. B.; A Birmingham General Practitioner; Medicus; T. O. W.; J. M.; M. A. L.; M.D. Scotus; ——, Knutsford; F. G.; &c. &c.

THE *Brighton Times*, the *Stirling Observer*, the *Glasgow Herald*, the *Cambridge Independent Press*, the *Japan Times* (Yokohama), the *Reporter*, the *Age we Live in*, the *Scottish Mercury*, the *Brighton Gazette*, the *Bucks Herald*, the *Surrey Advertiser and County Times*, the *Lincolnshire Chronicle*, and the *Midland Counties Herald* have been received.


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